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CANADIAN PUBLIC HEALTH ASSOCIATION





CANADIAN PUBLIC HEALTH JOURNAL

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MAY, 1936

Survey of Illness Amongst the Unemployed in Winnipeg*

March, 1934, to February, 1935, inclusive

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EARLY in 1934 the City of Winnipeg, through its Unemployment Relief Committee, made an agreement with the physicians of the city, as represented by their Medical Relief Committee, whereby all persons in receipt of unemployment relief might receive medical care; the city agreeing to pay the physicians for their services under a special schedule of fees, amounting to approximately 60 per cent of regular rates for general practitioners, with the proviso, however, that no physician would receive more than one hundred dollars (\$100) per month for such services. Later in the year a sliding scale which allowed a maximum of one hundred and fifty dollars (\$150) per month, in proportion to the amount of work done, was adopted. Slightly higher rates for specialists' services were allowed. To this arrangement some 220 physicians agreed. All recipients of unemployment relief, when in need of medical services, had the privilege

of choosing any physician who had signed the agreement, but were first requested to obtain a permit for this service from the relief medical officer employed by the city. Provision was made, however, allowing for the treatment of any emergency case without such permit. The physicians in turn were obliged to submit a medical report on every patient seen, to be followed by progress reports at frequent intervals or a discharge report. The accumulated accounts were submitted monthly to the city, and these were audited and passed for payment.

The circumstances outlined above made possible the accumulation of valuable records. Every illness occurring among those on relief was recorded in detail, and a large amount of useful information was made available. At the suggestion of the Provincial Department of Health and Public Welfare, and with the full co-operation of the Committee on Sociology of the Manitoba Medical As-

*Conducted by the Department of Health and Public Welfare, Province of Manitoba, and the Committee on Sociology of the Manitoba Medical Association, with the co-operation of the Winnipeg Unemployed Relief Commission.

sociation, and the Unemployed Relief Committee, a survey was made of the morbidity, and costs of sickness among this group of people for one year. This communication is a summary of the findings resulting from that study in reference to morbidity.

SCOPE OF STUDY

The material was gathered directly from the physician's medical report forms, which are on file at the relief office. All data relative to hospitalized cases were obtained by direct consultation of the hospital files of the various city hospitals, eight in number, not including the Isolation Hospital. (No records from this latter hospital are included in this summary.)

A period of one calendar year from March 1, 1934, to February 28, 1935, is included in the study. During this period there was a considerable variation in the number of people receiving relief. The range was from 38,558 to 29,988, with a monthly average of 33,731. The number of families varied from 9,535 to 7,447, with an average of 8,464. Thus the average of persons per family was four.

An analysis of these families by nationality, made at the end of the year, was as follows: Canadian, 32.3 per cent; English, 13.8 per cent; Polish, 8.8 per cent; Ukrainian, 8.7 per cent; Scotch, 6.7 per cent; Austrian, 4.7 per cent; German, 4.3 per cent; Russian, 4.3 per cent; Irish, 2.7 per cent; Hebrew, 2.6 per cent; American, 1.7 per cent; Swedish, 1.3 per cent; Hungarian, 1.0 per cent; Roumanian, 0.9 per cent; Norwegian, 0.7 per cent; and Italian, 0.6 per cent. Other groups were represented as follows: Danish, 46 cases; Welsh, 43 cases; Czecho-Slovakian, 43 cases; Icelandic, 39 cases; Dutch, 33 cases; French, 16 cases; Jugo-Slavian, 15 cases; Swiss, 15 cases; Belgian, 12 cases; Finnish, 9 cases; Chinese, 8 cases; Lithuanian, 7 cases; Latvian, 6 cases; Assyrian, 6 cases; Australian, 5 cases; Serbo-Croatian, 3 cases;

Armenian, 2 cases; Greek, 1 case; Japanese, 1 case; and others, 31 cases. Thus an extremely cosmopolitan population is represented. A large majority of these people have for many years previous to the depression been self-sustaining citizens of the middle class. Many had held clerical positions or were skilled mechanics. They were resident in practically every section of the city. Thus place of residence or immediate sanitary surroundings do not enter into this discussion. Practically 100 per cent were living in houses equipped with water and sewerage systems and electric lights, and many had gas or electric cooking facilities. Therefore, the group as a whole may be taken as fairly representative of a cross-section of the city; always, however, bearing in mind that these persons were forced to live on a stipulated amount for food, clothing, fuel, and shelter, and were in many cases in greatly reduced circumstances. The diet provided was adequate to supply the necessary food requirements for every member of the family, and the allowances for clothing and shelter were sufficient for a reasonable degree of comfort. It is not justifiable to suppose that any excess illness occurred among this group which could be traced to the reduced circumstances of their mode of living, or surroundings.

The result of this survey is not, of course, a complete record of all the ill-health prevalent in this population during the period of observation. Naturally there were many minor illnesses of such a trivial nature that no medical advice or treatment was obtained. It must be obvious from clinical experience, as well as from considerations of a practical kind, that the full extent of ill-health and its specific nature cannot be ascertained by any one method. This study, however, forms as accurate an account as is possible of the illnesses, their number, nature, and extent, for which a physician was called in attendance. The question may be

properly asked, Exactly what is meant by an "illness"? It is hard to answer with a precise definition. In this study the records of illness are those of attacks rather than illness in the sense of ill-health. The records of certain persons afflicted with some chronic condition show that they visited more than one physician for the same complaints. This would show in our records as two or more separate attacks of illness. Fortunately these instances are rare. Also, of those suffering from other chronic conditions, only those who suffered ill effects during the period of this study were recorded as having the condition. It is undoubtedly true that had the study continued for a longer period than twelve months more chronic conditions would have been brought to light, since time is a fundamental factor in recording and interpreting morbidity.

Perhaps it is sufficient simply to bear in mind that the chief aim of this study was to obtain a record of those illnesses which called for medical attention in a representative group of the population. In contrast to the findings obtained by a sickness survey made at a given time in a community, indicating sickness *prevalence*, this study gives a picture of the *incidence* of sickness in a general population group over a reasonably long period of time. A further object was to record the cost of complete medical attendance as given to this group of the population for one year, at the reduced rate of fees allowed, which would serve as a basis for future estimates of the cost of similar services.

CLASSIFICATION OF ILLNESS ACCORDING TO CAUSE

It was found difficult to select the primary cause of illness when several possible causes were recorded. In the case of many individuals there was filed a series of reports covering a considerable period of time, and this entire sickness history had to be considered in determining the primary

cause of a specific illness. Many report forms listed a series of symptoms with no definite primary cause or diagnosis established. It seemed to us that the primary purpose to be kept in mind was the *immediate cause of each specific illness*. The term "illness" was rigidly interpreted as a continuous period of sickness, regardless of complications, even though in some instances the coincident occurrence of two or more conditions seemed to be a matter of chance. Thus, a person who had grippe, measles, and chickenpox within one continuous period, without a definite statement from the physician that some time intervened between the separate conditions, would be credited with only one illness. A person with several chronic conditions contributory to a more or less continuous condition of illness was counted as sick only once, and only one condition was considered as the primary cause. For instance, many combinations of respiratory diseases were recorded, such as "cold and bronchitis, bronchitis and tonsillitis, tonsillitis and influenza". All were counted as *one* illness, and that condition which, from the available information, was chiefly responsible for the particular illness, was considered the sole cause. In many cases in which more than one cause of an illness was recorded, the following general rules were used in selecting the primary cause:

(a) The first cause, in order of occurrence, applied largely to acute conditions with common complications, such as measles and otitis media; scarlet fever and nephritis, etc.

(b) Acute conditions ordinarily were given preference over an attack of some chronic condition; thus in cases of grippe and chronic rheumatism the grippe was considered primary.

(c) The condition or disease "most specifically associated with the period of sickness" was preferred over a minor condition which preceded or accompanied it. When it was difficult to determine the factual basis, the more serious condition was chosen.

(d) The more specific cause was given preference over a statement of a symptom.

The form of the classification used was the International List of Causes

of Death, 1931 edition. Some departures, apparent to anyone more interested in the cause of illness than in a mere scheme of classification, were made from it. It was not considered practical to prepare a long detailed statement with each cause listed separately, but the various groups of related diseases were grouped into two logical classes, and in many cases one group of diseases was made of two, or several, closely allied diseases.

For purposes which will be apparent when we present the costs of illness, all cases reported were divided into three main divisions: medical, surgical, and obstetrical. While this is an entirely arbitrary division—many so-called medical cases later requiring

surgery, many obstetrical cases also at times requiring operative treatment, and many surgical cases at times requiring no operative measures at all—yet an attempt has been made to avoid overlapping of individual cases, and in only very rare exceptions has this occurred.

The basic data having regard to incidence of illness, classified according to cause, are presented in table I. In this table is shown the number of illnesses recorded during the twelve months, classified according to the sole or primary cause. The principal specific causes are shown, and also the totals for groups of diseases according to the International List. The second column shows the rate of incidence of each classification per

TABLE I

Disease	No. of Cases	Incidence per 1,000 Population	Total Days' Illness	Average Days' Illness
TOTAL RESPIRATORY DISEASES.....	2,957	87.8	30,108	10.3
Influenza and grippe.....	592	.....	4,923	8.3
Pneumonia.....	199	5.9	2,368	11.9
Pleurisy.....	82	2.4	1,733	21.2
Diseases of pharynx.....	1,008	29.8	6,583	6.5
(a) Tonsillitis.....	572	16.9	4,268	7.4
(b) Quinsy.....	53	1.6	445	8.5
(c) Sore throat.....	291	8.6	900	3.1
(d) Other dis. of pharynx.....	92	2.7	970	10.5
Diseases of larynx.....	96	2.9	1,166	11.9
(a) Laryngitis.....	74	2.2	786	10.5
(b) Croup.....	24	0.7	380	15.8
Hay fever and asthma.....	48	1.4	1,024	21.3
Pulmonary tuberculosis.....	39	1.2	.....	.....
Other diseases of resp. system.....	891	26.4	12,408	13.9
EPIDEMIC, ENDEMIC, AND INFECTIOUS.....	882	26.1	10,606	12.0
Typhoid fever.....	2	.....	110	55.0
Measles.....	564	16.7	5,600	10.0
Scarlet fever.....	63	1.9	2,030	32.2
Whooping cough.....	49	1.5	1,220	24.9
Diphtheria.....	50	1.5	579	11.5
Chicken pox.....	62	1.8	731	11.8
Tuberculosis—non-pulm.....	17	0.5	.....	.....
Veneral disease.....	51	1.5	.....	.....
Other dis. of this group.....	24	0.7	336	14.0
GENERAL DISEASES.....	359	10.6	8,166	22.7
Cancer—All forms.....	39	1.2	.....	.....
Rheumatism—Acute and chronic.....	133	3.9	2,733	20.6
Diabetes.....	37	1.1	1,285	34.7
Goitre.....	103	3.1	2,278	22.1
Other general diseases.....	47	1.4	1,870	39.7

TABLE I (continued)

Disease	No. of Cases	Incidence per 1,000 Population	Total Days' Illness	Average Days' Illness
DISEASES OF NERVOUS SYSTEM.....	646	19.2	8,526	13.2
Cerebral haem. and apoplexy.....	19	0.5	.....	.....
Paralysis.....	9	0.26	.....	.....
Epilepsy.....	34	1.0	.....	.....
Chorea.....	13	0.4	.....	.....
Neuralgia.....	136	4.0	1,720	12.6
Neuritis and sciatica.....	186	5.5	3,422	18.3
Headache.....	67	2.0	485	7.3
Mental dis. and neurasthenia.....	148	4.5	2,899	19.6
Other nervous diseases.....	34	1.3	.....	.....
DISEASES OF EYES AND ADNEXA	229	6.8	2,623	11.4
Blepharitis.....	19	0.6	452	23.7
Trachoma.....	2	0.6	90	45.0
Epiphora.....	1	.....	30	30.0
Optic neuritis.....	4	0.12	80	20.0
Glaucoma.....	5	0.15	65	13.0
Corneal ulcer.....	16	0.5	484	30.2
Chalazion.....	14	0.4	126	9.0
Iritis.....	9	0.3	122	13.5
Dacrocystitis.....	2	.....	30	15.0
Keratitis.....	5	0.15	140	28.0
Cataract.....	6	0.18	.....	.....
Conjunctivitis.....	146	4.3	1,013	6.9
DISEASES OF EAR AND MASTOID.....	439	13.0	3,918	8.9
Otitis media.....	376	11.1	3,469	9.2
Mastoiditis.....	15	0.4	249	16.6
Other dis. of ear (not deafness).....	48	1.4	200	4.2
DISEASES OF CIRCULATORY SYSTEM.....	767	22.8	10,145	13.2
Disease of heart.....	174	5.1	.....	.....
Arteriosclerosis.....	9	0.3	.....	.....
Haemorrhoids.....	78	2.3	1,175	15.1
Varicose veins.....	55	1.6	1,370	25.0
High blood pressure.....	91	2.7	.....	.....
Adenitis.....	127	3.8	1,537	12.1
Other dis., incl. anaemia.....	233	6.9	6,063	26.0
DISEASES AND DISORDERS OF DIGESTIVE SYSTEM.....	1,797	53.5	19,402	10.8
Ulcers of stomach and duodenum.....	165	4.9	4,520	27.4
Indigestion and gastritis.....	486	14.4	3,934	8.1
Stomach trouble (unqualified).....	156	4.6	1,396	8.9
Diarrhoea.....	153	4.5	1,232	8.0
Appendicitis.....	191	5.7	1,384	7.2
Hernia.....	74	2.1	.....	.....
Intest. disorders (constipation, enteritis and colitis).....	277	8.2	2,839	10.2
Biliary calculi.....	64	1.9	878	13.7
Cholecystitis.....	130	3.8	1,622	12.4
Jaundice.....	18	0.6	219	12.2
Other dis. of liver.....	6	0.18	300	50.0
Malnutrition.....	27	0.8	.....	.....
Other dis. of digest. syst.....	50	1.5	1,078	21.5
DISEASES OF TEETH AND GUMS.....	131	3.9	1,121	8.6

TABLE I (continued)

Disease	No. of Cases	Incidence per 1,000 Population	Total Days' Illness	Average Days' Illness
DISEASES OF KIDNEY AND ADNEXA.....	371	11.0	6,242	16.8
Nephritis.....	101	3.0	1,597	15.8
Cystitis and other bladder dis.....	134	4.0	2,050	15.3
Other dis. in this group.....	136	4.0	2,595	19.1
NON-VEN. DISEASES OF G.U. SYSTEM.....	927	27.5	20,088	21.7
Disease of male organs.....	84	2.5	914	10.9
Disease of female organs.....	428	12.7	10,495	24.5
Chronic salpingitis.....	61	1.8	1,660	27.2
Endometritis.....	60	1.8	1,565	26.1
Acute salpingitis.....	57	1.7	891	15.6
Prolapsis uteri.....	11	0.3	260	23.7
Vaginitis.....	36	1.1	790	21.9
Ovaritis.....	16	0.4	276	17.2
Pelvic inflammation.....	74	2.1	1,658	22.3
Fibroids.....	24	0.7	605	25.2
Ovarian cyst.....	19	0.6	400	21.0
Endocervicitis.....	75	2.1	2,390	31.8
Menstruation.....	308	9.1	5,405	17.5
Menopause.....	107	3.2	3,274	30.6
DISEASE OF PUERPERAL STATE.....	89	2.6	1,250	14.0
TOXAEMIAS OF PREGNANCY.....	83	2.5	849	10.2
CONGENITAL MALFORMATION AND INFANCY.....	102	3.0	868	8.5
DISEASE OF SKIN AND CELLULAR TISSUE.....	1,036	30.7	13,398	12.9
Furunculosis.....	92	2.7	918	9.9
Abscess and infection.....	156	4.6	2,343	15.2
Scabies and itch.....	73	2.2	789	10.8
Impetigo contagiosus.....	101	3.0	1,057	10.4
Other and unqualified conditions.....	614	18.2	8,291	13.5
DISEASE OF BONES AND LOCOMOTION.....	438	13.0	6,849	15.6
Lumbago, myalgia and myosites.....	177	5.2	2,822	15.9
Arthritis.....	239	7.1	3,537	14.9
Other diseases of bones and joints.....	22	0.6	490	22.3
SENILITY.....	31	0.9	.....	....
EXTERNAL CAUSES.....	844	25.0	9,385	11.2
Poisonings.....	20	0.6	201	10.0
Minor injuries.....	824	24.4	9,184	11.2
NOT OTHERWISE CLASSIFIED.....	217	9.1	1,384	6.4
Fever of unknown cause.....	6	0.18	29	4.8
Fainting and dizziness.....	33	0.9	300	9.0
Nasal polypi.....	18	0.5	255	14.2
Empyema.....	1	.....	30	30.0
Non-malignant tumors.....	14	0.5	331	23.6
Nasal ulcers.....	5	0.15	100	20.0
Sterility.....	1	.....	.....	.....
Gangrene.....	1	.....	.....	.....
Narcolepsy.....	1	.....	.....	.....
Bursitis.....	16	0.5	324	20.2
Serum sickness.....	2	.....	15	7.5
Referred for refraction.....	93	2.7	.....	.....
" " examination.....	21	0.6	.....	.....
" " cystoscopic.....	5	0.15	.....	.....

TABLE I (continued)

	No. of Cases	Incidence per 1,000 Population	Total Days' Illness	Average Days' Illness
MATERNITY CASES.....	830	24.6	.....	....
Abortions.....	137	4.0	.....	....
(a) At home.....	72	2.1	.....	....
(b) At hospital.....	65	1.9	.....	....
Full term.....	693	20.6	.....	....
(a) At home.....	78	2.3	.....	....
(b) At hospital.....	615	18.2	.....	....
SURGICAL CASES		No. of Cases	Incidence per 1,000 Population	
TOTAL RESPIRATORY.....	2		....
Empyema.....	1		....
Bronchoscopy.....	1		....
EYE, EAR, NOSE, AND THROAT.....	708		21.0	
Antrum disease.....	6		0.18	
Otitis media.....	10		0.3	
Mastoid.....	17		0.5	
Eye operations.....	15		0.5	
Tonsillectomy.....	660		19.6	
GENERAL DISEASES.....	36		1.1	
Diabetic gangrene.....	2		....
Goitre.....	22		0.6	
Tbc. glands and adenitis.....	12		0.4	
CIRCULATORY SYSTEM.....	16		0.5	
Haemorrhoids.....	16		0.5	
DIGESTIVE SYSTEM.....	270		8.0	
Gastric ulcer.....	7		0.19	
Appendicitis.....	185		5.5	
Rectal fissure and abscess.....	10		0.3	
Intussusception.....	5		0.15	
Gall bladder disease.....	31		0.9	
Bowel obstruction.....	5		0.15	
Hernia.....	25		0.7	
Dis. of liver.....	2		....
GENITO-URINARY SYSTEM.....	21		0.6	
Nephritic abscess.....	2		....
Stone in bladder.....	1		....
Urethral carbuncle.....	1		....
Renal calculi.....	1		....
Papiloma of bladder.....	3		....
Tbc. kidney.....	2		....
Prostate.....	7		0.2	
Hydrocele.....	4		0.12	

TABLE I (continued)

SURGICAL CASES	No. of Cases	Incidence per 1,000 Population
FEMALE GENITAL ORGANS.....	73	2.1
Fibroids, etc.....	22	0.6
Pelvic cellulitis.....	9	0.3
Ovarian cyst.....	15	0.5
Salpingitis.....	12	0.4
Ectopic pregnancy.....	11	0.4
Caesarian section.....	2	.....
Mastitis.....	1	.....
Perineal tear.....	1	.....
BONES AND MUSCLES.....	15	0.5
NEW GROWTHS.....	23	0.7
MINOR INJURIES.....	23	0.7
MINOR OPERATIONS.....	88	2.6
FRACTURES.....	120	3.5
SPRAINS.....	4	0.12
DISLOCATIONS.....	6	0.2
HARE LIP AND CLEFT PALATE.....	4	0.12

1,000 population. In the last two columns are shown the number of days' illness ascribed to the specific causes, and also the average days' illness per disease. In several chronic conditions this information was not accurately obtainable, and of course these cases must be considered when making totals. As the only means of recording days' illness was from the physicians' reports, it follows naturally that many mild and chronic conditions were of much longer duration than shown. Perhaps a more accurate statement would be that the last two columns show the number of days during which the patient was under actual medical care, due to these specific causes. An illness rate of slightly more than 0.4 per person per year is indicated, or 1.8 per family. This rate is naturally much below what a record of *all attacks* would show since, as has been stated, this is a record of illnesses of a sufficient severity to require medical care.

The causes of illness, as presented in table I, present an aspect quite different from that presented by the causes of mortality, as we now record and classify mortality. Of the total illnesses observed, we find the proportional distribution according to broad groups of causes in table II.

TABLE II

General Disease Groups	Per Cent of Total Illnesses
Respiratory.....	24.6
Digestive.....	14.1
Accidents and external causes.....	7.5
Skin.....	7.0
Confinements and abortions.....	6.2
Epidemic, endemic and infectious.....	5.9
Heart and circulatory system.....	5.3
Ear and mastoid process.....	4.4
Genito-urinary (non-venereal).....	4.3
Nervous system.....	3.7
Puerperal and menstrual.....	3.4
Bones and organs of locomotion.....	2.9
Kidneys and adnexa.....	2.6
General.....	2.6
Eye and adnexa.....	1.6
Teeth and gums.....	0.9
Others.....	3.0

TABLE III

PRINCIPAL CAUSES OF ILLNESS

Rates per 1,000 Population

Digestive system.....	61.5
Tonsillitis and sore throat.....	52.7
Respiratory diseases.....	52.5
Diseases of the skin.....	30.7
Confinements and other puerperal conditions.....	29.7
Accidents and other external causes.....	28.9
Heart and other circulatory diseases.....	22.8
Diseases of the nervous system.....	19.5
Non-venereal diseases of genito-urinary system.....	18.4
Lumbago, arthritis, and rheumatism.....	16.9
Measles.....	16.5
Diseases of ear and mastoid process.....	13.0
Diseases of kidney and adnexa.....	10.7
Diseases of eyes.....	6.0
Pneumonia.....	5.9
Diphtheria, scarlet fever, and typhoid.....	3.4
Tuberculosis, all forms.....	2.1

The relative importance from the point of incidence, not severity as measured by duration, incapacitation, or fatality, or by other means, of the principal diseases and groups of diseases is indicated in table III and needs no detailed comment. It may be somewhat surprising, however, that tuberculosis, cancer, diseases of the heart, kidneys, etc., upon which so much emphasis is placed in public health work, occupy such a low position in the list of diseases which cause illness. It is evident that as causes of illness in a general group (a group that has not been considered heretofore to the same extent as a special group of persons), these diseases are actually far less frequent than the ailments which most of us experience.

An accurate comparison of the above figures with the mortality rates for the same class of population is not possible owing to lack of available statistics. However, the mortality figures for the province of Manitoba, published in 1935, may serve as a reasonable basis, as our group under study is a fairly representative one. The mortality rates show that 14.3 per cent of all deaths were caused by heart diseases, while cancer accounted for 12.9 per cent, respiratory diseases for 11.8 per cent, and tuberculosis for 7.6 per cent. As compared with the corresponding percentages of total illnesses due to these diseases, the increasing significance of the unsuitability of mortality statistics as any indication of the cause of morbidity is very apparent.

During the course of the survey certain information became available in reference to pathological reports on tissues removed at operations. These

are of interest and indicate, we think, that due consideration, by consultation, etc., was given before an operation was performed. The data from 121 pathological reports received from the hospitals may be tabulated as follows:

Appendix: 94—Acute, 42; chronic catarrhal, 36; no microscopic evidence of inflammation, 14; very slight grade of congestion, 1; slight congestion of subperitoneal connective tissue near tip, otherwise normal, 1.

Gall bladder: 8—Definite gross pathology, 6; "mild muscular thickening, normal vol., no calculi", 1; some hyperaemia of deeper coats, mucosa normal, 1.

Stomach: 1—Fibro-carcinoma, malignancy grade 2.

Goitre: 3—Colloid, 1; Graves' disease in resting stage, 2.

Breast: 1—Carcinoma with involvement of lymph glands.

Ovary: 5—Definite gross pathology, 4; ovary showing usual small follicular cysts, otherwise normal throughout, 1.

Uterus: 4—Fibroids, 3; hypertrophic endometritis, 1.

Tubes: 5—Acute salpingitis, 2; chronic salpingitis, 2; tubo-ovarian abscess, 1.

The information submitted in this report is not to be considered indicative of all the illness prevalent in a given population over any period of time. As there was a quota system in operation limiting each physician to \$100.00 worth of work in a month, after the physician reached this amount he continued to do the work but probably did not send in reports. Again, some few men who were not on the panel for doing relief work no doubt looked after some of their old patients now on relief and did not make any charge to the city for the work done, and as a result no completed medical forms would be available. However, altogether probably 90 to 95 per cent of the medical service in this group was recorded.

The Health of Animals Branch and its Relation to Public Health*

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THE Health of Animals Branch of the Federal Department of Agriculture is primarily concerned with preventing the introduction of disease into Canada and maintaining the health of live-stock by controlling disease which may occur within the Dominion. The Meat and Canned Foods Act, which relates to export trade, is also administered by the Health of Animals Branch. The Pathological Division prepares biological products for the use of our inspectors, examines specimens, and conducts research to assist in the control of disease.

While all these activities are conducted primarily to assist the live-stock industry, they have a definite value in regard to public health through the control of diseases transmissible to man, such as rabies, anthrax, tuberculosis, and contagious abortion in cattle. Such activities as meat inspection, and supervision and testing of cattle, make an important contribution to the safeguarding of human health.

Our tuberculosis control policies, initiated in a small way more than thirty years ago, now involve the testing of about one million cattle each year. There are large areas in which all cattle have been tested and in such districts the milk supply may be considered safe in so far as tuberculosis is concerned. In some municipalities individual herds are tested under the Accredited Herd Plan or the Supervised Herd Plan. The local health authorities pass by-laws requiring all herds supplying milk to be

tuberculin tested. They do not, however, provide this service but take advantage of the provisions of these plans, thus obtaining their milk supplies from tested cows without incurring any expense in connection with testing.

The number of cattle tested under the several plans which were in force in 1916 was 2,332, while up to 1935, 4,007,130 had been tested. At present 2,251,771 are under supervision. As the cattle population in the Dominion is approximately 8,485,000, this represents 26.5 per cent of all cattle under test.

It is difficult to show the reduction in the extent of bovine tuberculosis because a single badly infected area may upset the figures for a particular year. There is, however, evidence that tuberculosis is being reduced and large areas now have infection reduced to less than half one one per cent.

During the years 1929-35, 4,639,542 cattle and 2,992,623 calves, a total of 7,632,165, were slaughtered under inspection. Of these, 314,943 cattle were found to present evidence of tuberculosis on post-mortem examination. Available data concerning the findings in calves relate to 1934-35, when 474 of a total of 307,348 calves slaughtered were found to exhibit lesions, or approximately 0.15 per cent. If, for the purpose of this discussion, this percentage be used in calculating the number of calves exhibiting tuberculosis during the period 1929-35, an estimate of 4,615 would be obtained. The total number,

*Presented at the Fourth Annual Christmas Meeting of the Laboratory Section, Canadian Public Health Association, Toronto, December 31, 1935.

therefore, of cattle and calves showing tuberculosis during the period of seven years as revealed by post-mortem examination would be 319,558, or approximately 4 per cent. If one deducts from the total number of animals slaughtered (7,632,165) the number of known reactors to official tuberculin tests (169,724), a net total of 7,462,441 is obtained. Deducting similarly the number of known reactors from the total number of animals showing tuberculosis on post-mortem examination, a figure of 149,843 animals is obtained, or approximately 2 per cent. Thus in over seven million cattle slaughtered under inspection in this period of seven years from 1929-35 inclusive, approximately 2 per cent showed infection with tuberculosis.

The data from tuberculin testing under the various plans of the Department of Agriculture indicate also that of approximately four million cattle tested to March 31, 1935, 6.7 per cent were reactors to the initial and subsequent tests. Of the total number of cattle slaughtered under inspection, approximately seven and a half million (deducting reactors), and the four million tested, approximately 419,000 animals were positive to the test or showed tuberculosis on post-mortem, giving a percentage of 3.6.

CONTAGIOUS ABORTION IN CATTLE (BANG'S DISEASE)

Stock-owners are offered co-operation in eradicating Bang's disease from their herds. A suitable method of testing is available, using a blood sample. This plan was inaugurated in 1919, during which year 32 herds were under supervision, and the number has increased each year until at present over 1,350 herds are under inspection. It is estimated that 20 per cent of the herds in Canada are infected with this disease. In individual herds it has been found that an average of 15 per cent of cattle react to the blood test. Reactors, except unbred yearlings and calves,

are permanently marked for identification.

Commencing January 1, 1936, cattle entering the United States must have a certificate of a negative blood test for Bang's disease made within sixty days. The Canadian regulations are similar. This will undoubtedly stimulate the interest of stock-owners in eradicating Bang's disease from their herds.

The stringent regulations of the American Import Milk Act, requiring that dairies in Canada exporting milk or cream must have healthy cows and proper milk houses, and conform to proper standards, has resulted in improved conditions on many farms.

This is an example of how requirements of other countries may have unforeseen benefits. The dairies supplying milk were made sanitary and only healthy cattle retained. Many of the owners of cows with diseased udders now find that since their removal no other cases have occurred. It is well known that when a farmer sees his premises clean and his herd healthy he has a tendency to maintain it in a better condition even when not governed by regulations.

THE MEAT AND CANNED FOODS ACT

This Act was necessary to meet the requirements of other countries so that our export trade in meat and meat-food products could continue and expand. There are some sixty packing establishments under permanent inspection and fifteen with temporary inspection. The inspection under the Meat and Canned Foods Act is thorough and probably second to none in the world. One hundred and sixty veterinarians are employed for their full time and are assisted by 87 lay inspectors who supervise sanitary measures and processing of meats. A careful ante-mortem and post-mortem examination is made by the veterinarians of all animals slaughtered for food in the packing houses under inspection. This is necessary as no meats or meat-food

products may be exported from one province to another or out of Canada unless they have been passed and certified.

The extent of this work may be appreciated from the following figures relative to the year ended March 31, 1935.

	<i>Carcases approved</i>	<i>Carcases condemned</i>	<i>Portions condemned</i>
<i>Cattle..</i>	1,332,639	17,731 (1.31%)	349,145
<i>Sheep..</i>	956,219	1,917 (0.22%)	134,585
<i>Swine..</i>	2,852,214	9,911 (0.34%)	2,043,540
	5,141,072	29,559	2,527,270

There were also 396,115 poultry killed under inspection, of which 4,772 were condemned.

Of 808,461 adult cattle slaughtered under inspection, 4.73 per cent were infected with tuberculosis. This figure, however, includes nearly 16,000 (1.97 per cent) reactors to tuberculin tests which were slaughtered.

Of the swine slaughtered, 24.2 per cent were infected with tuberculosis. Fortunately, infection in most cases is localized and slight, requiring condemnation of portions only. In swine avian infection is included and probably represents a considerable percentage.

The packing-houses under federal inspection handle large quantities of meat which enter local or provincial trade, and almost fifty per cent of all meat consumed in Canada is meat which has passed inspection under the Meat and Canned Foods Act. If consumers insist on obtaining such meats they are procurable, but a large percentage of the population probably do not know of the importance of using only inspected meat.

As the appearance of meat as sold, and especially of meat-food products, gives little indication of the wholesomeness of the original products in regard to freedom from disease or of the conditions under which it has been handled, it becomes a proper function of public health authorities to ensure adequate inspection and proper labelling.

Unsatisfactory conditions exist in

many municipalities and local authorities endeavour to meet the situation, including control of private slaughter-houses. It is generally accepted that a proper meat inspection service cannot be provided by a local authority if the slaughtering of animals is carried out in many small slaughter-houses, because only intermittent inspection is possible with the personnel available. Proper inspection is possible when large plants are involved or in municipal abattoirs where compulsory slaughter at such abattoirs is enforced. Advantage may well be taken of the federal meat inspection service by provincial or municipal authorities to provide inspected meat. To obtain the services of Dominion inspectors, the packing plant or abattoir must be engaged in export or interprovincial trade and the volume of killing must merit the employment of a full-time inspector. Inspection is not limited to meat for export or interprovincial trade but "Canada approved" meats are available for local use.

An important campaign is now being conducted in the United States to require that the inspection of meats within the individual states be raised to the standard of the federal Bureau of Animal Industry. To bring this into effect an Act "to provide that the United States shall co-operate with the states in maintaining systems of meat inspection, to amend the Federal Meat Inspection Act of June 30, 1906 (34 Stat. 674), as amended and supplemented for other purposes" has been outlined, and also Acts by the individual states which wish to take advantage of the federal assistance. Accordingly each state would have its meat inspection law, and if the inspection were maintained and approved by the Federal Government, assistance to the extent of one-half the cost of state inspection would be paid by the Federal Government. The controlling interest involved by payment of half the cost by the United States Government would overcome the local difficulties often experienced

in regulatory measures by other than national governments.

TRICHINOSIS

A recent outbreak of trichinosis in man in Montreal has attracted attention to this parasitic infection and its relation to meat inspection. Sixty-eight known cases of trichinosis in human beings occurred. The origin was traced to products intended to be eaten without cooking, which had been distributed by a local firm whose main supply was country-bred hogs. The first case showing symptoms was observed on October 15th and the last on November 10th, but it was only about November 7th that a diagnosis of trichinosis was made. Practically all the patients were in the habit of eating sausages, which are very often only slightly cooked or smoked. None of the plants in Montreal under federal inspection manufacture this type of sausage.

Trichinosis is much more prevalent than is usually supposed. It is estimated from post-mortem examinations that 20 per cent of the people in the north-eastern states of the United States are infected although not likely showing symptoms which are recognizable. It is well known that the list of diseases for which trichinosis has been mistaken is a very long one. Fortunately a skin test has been discovered which should simplify diagnosis. The antigen is made from trichinae which have been removed from their cysts by digestion and ground up to make a 1:10,000 suspension.

The microscopic examination of pork is not satisfactory as only relatively small portions can be searched and there is no assurance that other portions are free from trichinae. If it should become necessary to examine pork, a precipitin test is reported to give satisfactory results. It is

quite impracticable to examine the flesh of pigs for these parasites as a routine measure, but as fresh pork is cooked before being eaten, such examinations of pork are not considered necessary. In Canadian packing-houses under federal inspection, all meats or meat products which are so prepared that they are usually eaten without cooking and which contain pork, such as summer sausage, Brunswick sausage, and Italian and Westphalian hams, etc., are treated by heating, refrigeration and curing in such a way as to preclude the possibility of trichinae infection through their consumption. In export meats the particular requirements of the country of destination are observed.

The practice of feeding pork scraps to pigs is probably the source of infection, although it has been generally supposed that hogs are infected by eating rats. To kill trichinae various methods are employed. The meat may be stored for 20 days at a temperature not higher than 5°F. or all parts of the flesh may be heated at a temperature not lower than 137°F. Sausage meat may be salted in pieces not exceeding 3/4" in diameter, with 3-1/3 pounds of salt to each hundred pounds of meat. After the sausages are stuffed they are placed in a drying room for 20 days at a temperature not lower than 45°F. Hams may be dry-cured for forty days at a temperature not lower than 36°F. by salting with four pounds of salt per hundredweight. They should be examined at least once during this period and additional salt may be applied to the lean meat if necessary. Hams may also be pumped with pickle if desired. After curing, they may be soaked in water at a temperature not higher than 70°F. for not more than 15 hours, during which time the water may be changed once. Finally they are pale-dried or smoked for not less than 10 days at a temperature not less than 95°F.

The Standardization of Laboratory Methods useful in Controlling the Quality of Dairy Products*

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CANADIAN public health workers have from the beginning co-operated in the work that has been done by the American Public Health Association in standardizing laboratory methods for the examination of milk and other dairy products. Those of us who remember the early work that was done in preparation for the first edition of *Standard Methods of Milk Analysis* issued in 1910 will recall the interest of Dr. F. C. Harrison and Dr. H. W. Hill in this work. Dr. Hill had been active in public health work in Boston, but was at the time Director of the Institute of Public Health at London, Ontario, and more recently has been active in public health work in British Columbia.

Later, Dr. N. MacLeod Harris and others took active part in the work and their interest in this field of effort has remained continuous and effective. Mr. M. H. McCrady, Director of the Provincial Laboratory for Quebec, has been particularly helpful recently because of his knowledge of the various techniques that have been developed for detecting the presence of organisms of the colon group in dairy products. Another Canadian worker who is proving himself most useful in this work is Prof. H. R. Thornton of the University of Alberta. He is interested in bringing about a better standardization of the methylene-blue reduction technique and has made some suggestions for improving the stan-

dardization of this technique that will be discussed later.

A most interesting connection between the early work and the present work in this field is furnished by the recent appointment of Dr. A. J. Slack, the present Director of the Institute of Public Health at London, Ontario, and Vice-Chairman of the Laboratory Section of the Canadian Public Health Association, as one of the Referees of the American Public Health Association on the Committee on Standard Methods for the Examination of Dairy and Food Products. Dr. Slack is a brother of the late Dr. F. H. Slack, who was Chairman of the Committee on Standard Methods for the Examination of Milk, at the time the first report¹ was issued in 1910. Since that time, revisions have been issued at 3- to 5-year intervals recording progress in this field of public health work. The present edition is the sixth of this well-known report.

Since the reorganization of the Standard Methods Committees of the Laboratory Section of the American Public Health Association in 1932, the Committee on Standard Methods for the Examination of Dairy and Food Products has been developed in such a way as to draw a number of new men into the work. These men are of two groups: municipal, provincial or state officials who are responsible for the laboratory work on which milk control work is based, and specialists actively interested in some of the

*Presented at the Fourth Annual Christmas Meeting of the Laboratory Section, Canadian Public Health Association, Toronto, December 30, 1935.

methods used in control work. The amount of work that can be done profitably in this field is large so that this development has permitted undertaking several lines of effort that were not possible under the older method of organization.

A MORE SATISFACTORY STANDARD AGAR

Some investigations have been undertaken to clarify points that have been under discussion for many years. These deal particularly with the development of an agar of more satisfactory composition than the present standard agar² and with the use of an incubation temperature that will stimulate the development of a greater number of colonies on agar plates, and, at the same time, make it less important to maintain an absolutely uniform temperature in incubation chambers.³ The most promising agar developed thus far is the tryptone-glucose-skim milk agar suggested by Bowers and Hucker and made available by the Digestive Ferments Company. The best incubation temperature lies between 30° and 32°C.

METHYLENE-BLUE REDUCTION TEST

A study of the methylene-blue reduction test has shown that there are several places where this test needs better standardization. While the methylene-blue tablets used in America permit a much better standardization than would be brought about if each laboratory attempted to standardize its own methylene-blue solutions, the standardization of these tablets has not been perfect. The experience that has been gained by the manufacturers of these tablets in the past will permit a much better standardization of the tablets in the future. Moreover, studies by our Associate Referee, Prof. H. R. Thornton, in this field indicate that methylene-blue thiocyanate is a better dye to use in this work than the commonly used methylene-blue chloride.⁴ He recommends that the solutions

used for this work be standardized for future work so as to contain one part of methylene-blue thiocyanate to 300,000 parts of water.

OTHER IMPROVEMENTS

Progress has been made during the past few years both in regard to the development of a better technique for recognizing those beta haemolytic streptococci that cause milk-borne epidemics and in regard to our knowledge of the distribution and relationships of these organisms. Likewise, the characters that differentiate these streptococci from the streptococci of ordinary bovine mastitis are better known than they were when the sixth edition of the Milk Report was issued.

The inclusion of a method for recognizing organisms of the colon group in dairy products has stimulated still further studies of the usefulness of such a method. These studies are demonstrating the soundness of the requirement in the sixth edition of Standard Methods of Milk Analysis that indiscriminate testing of samples of dairy products for organisms of the colon group be discontinued. Useful information can, however, be secured where samples of definite types are examined if these samples are taken in such a way as to eliminate the possibility that there has been growth of the organisms of this group in the sample. The conclusions of McCrady and Langevin, and of Slack and Maddeford,⁵ that the colon technique is useful as a means of detecting inefficient pasteurization and recontamination during the bottling process are being fully substantiated. Additional papers discussing these problems were presented before various scientific associations during the autumn and are now in process of publication.⁶

Interest is also being shown in the utilization of bacterial counts of samples of ice cream and other frozen products as a means of determining whether the materials used have been (1) properly pasteurized and (2) protected from recontamination after pas-

teurization. The Committee maintained by the International Dairy and Milk Inspectors' Association⁷ has been most co-operative and helpful in developing interest in this subject, as has also the Committee on Ice Cream Methods maintained by the American Dairy Science Association.⁸

For many years it has been realized that sanitary conditions on farms producing cream for butter making, and in some butter factories, do not compare with the conditions that are being maintained on dairy farms and in dairy plants where milk is produced and handled for consumption in fluid form. The development of laboratory methods for the examination of sediment in butter⁹ that will reveal something of the sanitary conditions under which the butter has been produced has stimulated interest in the introduction of a standard technique for this purpose. The use of this technique has at least resulted in bringing about better filtering of the cream from which butter is made and is producing more lasting benefits than this. While microbiologists are not yet in entire agreement in regard to the significance that should be placed on yeast and mould counts from butter, research work in this field suggests certain possibilities for the use of laboratory technique of this type in official control work.¹⁰

As the next report issued by the American Public Health Association is to include methods for the examination of ice cream and butter as well as for milk, it is probable that it will be given the title of "Standard Methods for the Examination of Dairy Products" rather than the present title of "Standard Methods of Milk Analysis".

Much interest in the general subject of the utilization and standardization of laboratory procedures for the control of the sanitary quality of dairy products was shown at the Tenth International Dairy Congress in Rome in May, 1934. English authorities are, perhaps, the most active of the

European public health workers in the milk control field, although public health workers in a number of European continental countries are also very active. Naturally these workers have examined carefully the work that started in America about thirty to forty years ago. At the moment, English agricultural authorities use the colon test, a keeping-quality test, and the total count as a means of determining the sanitary quality of milk. They make the total count on an agar plate showing the same composition as is used in America with the exception that one per cent of fresh skim milk is added.¹¹ On the other hand, public health authorities in England regard the agar plate count as being too inaccurate for use as a basis for a milk control program of milk quality and prefer a modified form of the methylene-blue reduction technique.¹² Meanwhile, in Germany, the committee authorized to prepare a report on uniform methods for the examination of milk has recommended the use of a bacterial count determined on lactose agar plates incubated at 30°C.

There is a general feeling in these European countries that it is desirable to bring about an international standardization of technique in this field and a symposium on this topic is being organized in connection with the Second International Microbiological Congress that is to be held in London at the end of July, 1936. A number of persons, including representatives from the United States and Canada, have been asked to participate in this discussion.

During the coming year still further use will be made of the address list of 1,000 or more laboratories in the United States and Canada using standard methods for the examination of dairy products to distribute questionnaires and information which it is hoped will stimulate laboratory workers to give greater attention to a real standardization of the technique now in use. We are all aware of the fact that laboratories that claim that they

are following standard procedures do not always follow directions in detail, even sometimes failing to observe quite important requirements.

The Committee on Standard Methods for the Examination of Dairy and other Food Products of the American Public Health Association has the following personnel at present: *Chairman*, Robert S. Breed; *Referees*, Mac H. McCrady (Montreal), A. H. Robertson (Albany), F. C. Blanck (Washington, D.C.), C. A. Perry (Baltimore), A. J. Slack (London, Ontario), R. V. Stone (Los Angeles); *Associate Referees*, G. J. Hucker (Geneva, N.Y.), F. W. Fabian (East Lansing), C. C. Carson (Hartford), H. R. Thornton (Edmonton), W. A. Hagan (Ithaca), I. F. Huddleson (East Lansing), E. H. Parfitt (Lafayette, Indiana), C. S. Mudge (Davis, Cal.), F. H. K. Reynolds (Washington, D.C.)

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The Role of Non-Faecal Bacteria in Water Supplied to Creameries*

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WATER supplies for creamery use should not only be free from bacteria of intestinal origin but should also be reasonably free from the so-called harmless bacteria. These harmless bacteria may or may not be injurious to the health of the consumer. If incorporated into butter through the wash water they may cause the butter to spoil rapidly so that it becomes unsaleable. The official name for this spoilage is surface-flavour.

In the manufacture of butter large quantities of water are required to wash the buttermilk residue from the butter granules. Butter contains in the neighbourhood of 16 per cent water. Much of this moisture in butter originates from the wash water. If the wash water is contaminated the bacteria will also become incorporated. There is also a slight residue of milk solids in all butter. Pasteurization is demanded of all cream to be churned into butter by all creameries in Ontario. Pasteurization effectually removes all competition from acid-forming bacteria which would otherwise inhibit the growth of putrefactive bacteria.

In time, depending upon the initial contamination, the effect of the invading bacteria becomes noticeable. The most serious spoilage occurs within a week after the butter is packed. The whole surface of the butter develops a disagreeable odour and flavour which may be cheesy or like spoiled meat, and in serious cases like stagnant water.

The original name given to this defect was sewage-flavour, but this

was later changed to surface-flavour, for obvious reasons.

There are several types of bacteria common to water supplies that may give rise to objectionable odours and flavours in butter. All proteolytic or lipolytic bacteria in waters are looked upon with suspicion. The most important belong to the fluorescent group. Of these *Pseudomonas fluorescens* is the most important because it is so constantly present and can break down fats as well as proteins.

The origin of surface-flavour bacteria in water is from surface drainage, especially from swampy lands. Shallow wells and slow-moving streams are often contaminated. Municipal supplies that are well controlled sometimes contain bacteria capable of producing surface-flavour.

A temporary solution of the problem is comparatively simple; namely, to churn the cream at an acidity of 0.35 per cent, calculated as lactic acid. This acidity will effectually inhibit the growth of surface-flavour bacteria in the butter. This is too high an acidity, however, for market conditions and is not desirable.

The permanent solution of the problem, where the water is from a private supply, is also comparatively simple. The supply is either pasteurized or chlorinated, or a new clean supply is obtained.

It is a different problem when surface-flavour bacteria are found in water supplied by a municipality. The water is usually regularly tested for pollution by intestinal bacteria and

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found to be safe for human consumption. The authorities cannot understand how a water which is safe for drinking purposes may not be safe for washing butter. In the majority of cases, after much explaining, co-operation is obtained, as is instanced in the following example.

Creamery X obtains its water from the municipal mains. The water is metered as it enters the building. During the past two years this creamery had intermittent outbreaks of surface-flavour. Examinations of the water about every two weeks showed that contamination with surface-flavour bacteria had been intermittent. When these bacteria were numerous, the flavour in the butter had been marked, but when the water was free from the contamination the butter had also been free from surface-flavour. During this time regular tests had been made, giving evidence that the water was free from intestinal pollution. The surface-flavour outbreaks were absent in dry weather, but severe following prolonged wet weather.

The authorities allowed me to examine the sources of the water supply. The supply originates from springs at the base of a large rocky hill. The water seeped down through vegetation to collection ditches filled with large stones. These ditches led to cement catch basins. Properly installed mains carried the water to the reservoir and to the town. It was suggested that the rock-filled ditches be eliminated and that the water be collected directly from the springs. This was done. Examination of the water about two weeks later from various taps on the main serving the creamery showed that surface-flavour bacteria were absent in all samples except that from the creamery tap. Permission was obtained to remove the meter and a sample was taken of the water before it entered the meter. The meter was replaced and another sample taken from the meter outlet. The water, before being metered, was free from surface-flavour bacteria, but the water which passed through the meter had more than 10,-

000 bacteria per cc. The meter was then examined and the screen removed. The screen was found to be clogged with swamp residue consisting of fragments of dead leaves, small snail shells, and a small bone of either a bird or a rodent.

Since the examination and cleansing of the meter, occasional outbreaks of surface-flavour have occurred. These have coincided with severe contamination of the water. The only explanation possible is that there must be considerable swamp residue within the many miles of mains, which from time to time becomes disturbed. To meet the situation the creamery is now chlorinating all water used for butter-washing purposes.

The detection of members of the fluorescens group of bacteria in water is simple. Petri dish plates are made of 1 cc. and 1/10 cc. quantities of water and poured with standard beef peptone agar with a reaction of pH 7.2. The plates are incubated for four days at 25°C. A distinct greenish-yellow discolouration of the medium surrounding the colonies identifies the type.

A disagreeable odour arising from any set of plates, regardless of the type of bacteria, suggests surface-flavour bacteria in the water in sufficient numbers to cause damage to butter washed with it. Water samples showing counts that exceed 500 colonies per cc. regardless of type are considered to be of doubtful quality for washing butter.

No evidence is available to show that butter spoiled by proteolytic or lipolytic bacteria of wash water origin is dangerous to health.

SUMMARY

Contaminated water supplies have caused considerable damage to butter during the period between 1922 to 1935. Often the water was found to be free from intestinal pollution and was considered satisfactory for human consumption. The co-operation of public health laboratories is solicited so that the unnecessary losses from spoilage of butter may be prevented.

The Applied Aspects of the Venereal Disease Legislation of Ontario*

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A STATUTE consists ordinarily of a series of clauses or sections which convey purpose and authority in the matter of the particular acts, circumstances or relationships which it intends to regulate or govern. The actual mechanics, on the other hand, of giving practical effect to the statute are usually none too clearly indicated but are left to systematization at the hands of those who are called upon to guide the administration of the law in question.

The applied aspects of the Venereal Diseases Prevention Act of Ontario, or any province for that matter, must continue to furnish an engaging study to those who have to plan or who, having inherited earlier planning, are required to exercise the procedure which has been evolved to bring under control a situation quite delicate of character, yet widely significant from both medical and social viewpoint. Having become involved in at least one of these phases, I shall endeavour to present an outline which will show how a plan of action, rooted and supported in the Ontario Act, may be effectively carried out and which will indicate the responsibilities and privileges conveyed therein. As is to be expected, I shall draw in large part on my knowledge of the methods employed in the city of Toronto. Every municipality in Ontario is required to set up a measure of activity in the direction of venereal disease control; depending upon its needs and its resources, the municipality may find it necessary—in fact, quite satisfactory—to modify the program herein detailed.

The text of the Venereal Diseases Prevention Act of Ontario, and of the Regulations passed pursuant thereto, is set out in terms of the responsibility and authority, the interests and the limitations of certain more or less well-defined groups within the community.

DUTIES AND POWERS OF THE MEDICAL OFFICER OF HEALTH

The medical officer of health of the municipality is essentially the moving spirit in the program for control of venereal disease (an acute communicable disease, for that matter) within his municipality. It is in him that the authority, as conveyed by the Act, is primarily vested. A very large proportion of the prevailing venereal disease is treated and brought to a successful termination without any participation on his part; nevertheless, he is responsible, so far as it lies within his power, to foster the co-operation of the practising profession and to endeavour to satisfy himself that the physician appreciates his own responsibility, knows when and how this responsibility is to be discharged and where that of the medical officer of health may begin. Whenever compulsion and force must be directed towards infected individuals or those under suspicion, it is the medical officer of health who initiates and guides the procedure.

He is required to provide facilities for those who are unable, for financial or other reasons, to secure treatment (Regulation (c), Sub-section I). Clinics have largely obviated this necessity. He must report weekly to the

*Presented before the Section of Social Hygiene at the Twenty-Fourth Annual Meeting of the Canadian Public Health Association, Toronto, June, 1935.

Department of Health of Ontario the aggregate of all cases of each of the venereal diseases reported to him during the week preceding (Regulation (g)).

Further powers given to the medical officer of health are dealt with more advantageously in the sections which follow.

STATUTORY FORMS

These are prescribed in Regulation (a) and are six in number:

Form I V.D. "Notice to Persons Suspected to be Infected or Exposed to Infection with Venereal Disease"—An order to require examination.

Form II V.D. "Notice to Medical Practitioner to Examine and Report upon a Person Suspected to be Infected with Venereal Disease"—Authority to examine.

Form III V.D. "Report or Certificate of a Legally Qualified Medical Practitioner"—Certificate giving result of examination.

Form IV V.D. "Notice Respecting the Course of Conduct of a Person Infected with Venereal Disease"—Order requiring treatment and observance of rules of conduct.

Form V V.D. "Authority to Enter into a House or Upon Premises"—Rarely used, except where obstruction may be encountered or patient unable to leave premises.

Form VI V.D. "Report (to Medical Officer of Health) of Venereal Disease"—In three parts, the uses of which will be detailed later.

The special considerations associated with the use of these forms will be considered in succeeding sections of this paper.

THE RESPONSIBILITIES OF THE PRIVATE PHYSICIAN

A client may present himself before a physician for diagnosis, voluntarily or under the duress of Form I V.D. Methods to be employed by the physician in his examination are detailed in Regulation (n). A positive diagnosis at once places an obligation on the physician and on the patient. When under the order of Form I V.D., the patient is *personally* responsible for delivery to the medical officer of

health of a certificate stating *whether or not* he is suffering from venereal disease and, if so, in what form. The physician will find a supply of Form III V.D. a convenience in this connection.

In certain rare instances the medical officer of health may wish to authorize a physician to conduct an examination. Form II V.D. is employed for this purpose. This form, however, is more often used to empower physicians attached to places of custody to make required examinations.

In the sphere of private practice, nothing in the Act or Regulations conveys that a physician must of necessity receive venereal disease for diagnosis or for treatment, unless it is his wish to do so. Once he receives a case, however, he assumes a large measure of responsibility. He must report the case, not by name but by serial number. If the patient has previously, to his knowledge, been under the care of another physician or institution he must convey this fact, chiefly for the purpose of its statistical value, also without giving the name of the patient. Part 1 of Form VI V.D. is provided for these purposes.

The physician is morally responsible to provide the very best treatment at his command. Regulation (b) specifies what are considered lawful and proper methods and remedies for the treatment, alleviation and cure of venereal disease.

If the physician voluntarily relinquishes attendance on a given case, he should assure himself that the patient is actively continuing under the care of a competent physician; failing this, or perhaps in all cases, he should communicate the situation to the medical officer of health, so that the latter may take steps to satisfy himself that the patient is receiving treatment.

Regulation (f) admonishes the physician and others that they maintain every precaution against the spread of the disease. The obligation sug-

gested in the next preceding paragraph in its final analysis may be brought under the terms of this regulation.

Should a patient abandon treatment a further responsibility is placed on the physician. Regulation (c) places specified obligations on the patient and in a sub-section provides that upon default of continuous treatment until non-infective the patient shall be reported to the medical officer of health. The communication which is used for the transmission of this information must be signed by the physician and forwarded in a *sealed* envelope.

Whenever, in the course of consultation with a patient suffering from venereal disease, a physician comes into possession of credible information as to the identity of the individual who, in the opinion of the patient, was the source of his infection, it is expected that the physician communicate the facts to the medical officer of health, so that action may be taken as authorized in Section 3 of the Act. The same procedure applies also to the contacts of known cases. A provisional exception may be made to this rule if the source or contact or both lies within the immediate circle over which the physician has for the time being supervision or control. Failure to procure immediate or adequate action suggests the course stated previously.

Section 9, Sub-section 2, of the Act specifies that disclosures may be made in good faith to the medical officer of health when such will aid him in carrying out the provisions of the Act.

The Department of Health of Ontario has assigned itself the responsibility for the provision of useful information for the attention and guidance of sufferers from venereal disease in the matter of conduct, personal hygiene, etc. (Regulation (d)). Such information, of which Part 3 of Form VI V.D., is one specimen, is required by the Regulation to be distributed by the physician to his patients.

OBLIGATIONS PLACED UPON INFECTED MEMBERS OF THE PUBLIC AT LARGE

The Act aims essentially at prevention and is primarily more concerned in preventing infection than it is in enforcing treatment. Treatment, however, is vital if for no other reason than that it reduces the sources of infection. Prevention and treatment are, therefore, in reality for the most part inseparable.

Section 7 of the Act prohibits any act which may or will lead to infection of others.

The Act empowers the medical officer of health (Section 3) under certain circumstances (upon receipt of credible information) to enforce compulsory examination of individuals who have allegedly infected or are likely to infect others.

Regulation (c), made pursuant to Section 12 of the Act, defines the course of conduct of infected persons. By close observance of this regulation, any conscientious sincere individual suffering from venereal disease may carry on treatment without molestation of any sort. He shall, however, place himself under the care of a physician until non-infective, shall accept the latter's instruction, and shall abstain from marriage, sexual intercourse or any conduct likely to infect another.

An infected individual unable to secure private attendance shall apply to the medical officer of health (Regulation (c)).

Infected persons in hospital are subject to the instructions laid down by the physician or superintendent in charge (Regulation (e)).

SPECIAL MEASURES EMPLOYED WITH RESPECT TO THE PUBLIC AT LARGE

Credible information coming to the notice of the medical officer of health from a physician, clinician or private citizen, from any competent individual in fact, merits action by the health authority. Absolute credibility of the information so received

is difficult to establish in many instances. It is therefore common practice in Toronto to use what might be called a courtesy letter which invites the individual to the health offices; the individual usually appears, the situation is discussed with him, and the next step determined, which may or may not be service of Form I V.D. Should he not appear, the form will invariably ensue. In special instances (known reputation of the individual, multiple complaints concerning the same person, urgency of the situation, etc.) the use of the form may be at once indicated.

If a positive diagnosis follows, two courses are open: to serve Form IV V.D. or to permit the infected person to secure treatment voluntarily, the value of the statement of intention usually being determined by follow-up observations.

Abandonment of treatment reported by physician or clinician suggests action by way of a Form IV V.D., although here again it is common practice first to summons individuals by letter.

Defiance of, or failure to comply with, requirements as set down in Forms I V.D. and IV V.D. justifies legal proceedings. Before resorting to this extreme measure, it is customary in Toronto to send by registered mail to the person concerned a warning letter, another of the so-called "courtesy letters", detailing the basis for action and warning him of the impending embarrassment.

Proceedings against individuals for other breaches, such as deliberate infection, marriage while infective, etc., are rarely necessary, but are authorized by the Act.

Detention in hospital becomes at times an expedient measure. Not being places of custody in the ordinary sense, hospitals face difficulty in the matter of forceful restraint. Usually it is sufficient to visit the patient in hospital and explain to him the reason for such official action. In other rare instances it is necessary to

order detention at the hands of the head of the hospital and to acquaint the patient of the order and of the consequence of the failure to comply. Should the patient take leave against orders, Regulation (r) provides for the laying of information which will lead to the apprehension of the individual by virtue of authority conveyed by Sub-sections 3 or 4 of Section 3 of the Act.

In our various contacts with individuals it has been impressed upon us that educational work is of more importance than official action under the Act. We will all agree that results are desired rather than penalties. The first interview with the patient is extremely important; it often helps to establish regularity of treatment. One of the most essential attributes of the health worker is that he or she possess the right attitude toward the person suffering from venereal disease. These people are not to be regarded as moral lepers; in many instances they have difficulties and hardships which may not be clearly understood. For this reason we believe that we are more than justified in communicating with people and endeavouring to discuss the whole situation with them before taking more drastic action.

MEMBERS OF THE PUBLIC UNDER ARREST OR IN CUSTODY

That portion of the public coming under arrest or continuing in custody affords a ready group for investigation and for continued treatment under supervision, when treatment is indicated. The authorities at no time have had thought of taking undue advantage of these unfortunates, but rather have been mindful that a certain element of the group has revealed a high incidence of disease. A violation of law in which sex offence or promiscuity is involved or implied naturally tends to cause one to suspect the presence of venereal disease. Empowering legislation directed at this group is conveyed by Section 2 of the Act, and by Regulation (q).

SPECIAL MEASURES APPLICABLE TO
THE PUBLIC UNDER ARREST
OR IN CUSTODY

In Toronto all female court cases and such male cases as involve sex offence are tried in the Women's Court. The Department of Public Health employs an experienced individual (not necessarily one with legal status) who is present at court to carry out any action under the authority of the Venereal Disease Prevention Act.

A copy of the list of cases to be heard in Women's Court is received in the offices of the Department early each day of court. This arrangement serves as follows:

1. To locate the odd individual previously dealt with under the Act, who meanwhile has escaped his obligation.

2. To enable the Department's court representative to serve such orders of detention as may be indicated and to enable him to locate information which will lead him to bring to the offices of the Department such individuals as may be released from custody and as may require further investigation under the lay terms of the Act.

This general plan is known to the officials of courts other than the women's, and the special officer is available for service along these lines in any court dealing with Toronto citizens.

A few considerations are worthy of note with respect to trials or hearings before magistrates. Departures from the principles therein implied are often not only a source of annoyance but are suggestive that the original purpose of the legislation is frequently lost sight of. Thus:

1. Immorality does not of necessity imply the presence of venereal disease.

2. The presence of venereal disease does not make it wholly impossible for an infected individual to live peaceably and without menace within a community.

3. Regardless of the presence of venereal disease, assumed or known,

the original charge laid should be the basis for disposition of the case so far as the magistrate is concerned. Venereal disease information is not intended to satisfy the social conscience of the trial judge but is for the guidance of the medical officer of health and any action he may wish to initiate.

4. It is not intended that it should be permissible to hold in custody a person against whom a charge has been preferred for the mere purpose of ascertaining whether or not he has venereal disease.

5. The medical officer of health alone is empowered to detain those for whom he holds a diagnosis, and who, in his opinion, are not likely to, or have shown that they will not, observe the rules of treatment and conduct. In this connection he may, as sometimes happens, actually offset dismissal of the case by the magistrate.

6. An individual remanded in custody for reasons arising out of an original charge may be examined at the hands of the jail surgeon. Positive diagnosis may determine the need for detention regardless of the final disposition of the case, but this will be an act solely of the medical officer of health.

7. The individual who is acquitted and not detained by the medical officer of health and who may have venereal disease may be brought before the health authority as a lay person and dealt with as such.

From the foregoing it is plainly evident that a very considerable amount of good sense and judgment is necessary of those entrusted with these phases of the administration of the Act, in order that they not depart far from an original purpose of the legislation, namely, firmness with justice.

Related to the authority already detailed, the medical officer of health, once having detained an individual, may detain him until cured or until no longer infective, even though such detention extend beyond the expira-

tion of the term of imprisonment imposed. The heads of jails are required to carry out such direction of the health authority. It has become practice for penal institutions to provide means by which these requirements may be favourably fulfilled and so the facility for treatment has become a part of organization.

It is not the custom for a local medical officer of health to deliver an order for detention to the head of a provincial prison or reformatory. Long or indeterminate sentences usually obviate the necessity; the parole board is respectful of a history of infective disease, and the medical officer of the institution is to all intents and purposes an administrative officer under the Act. In the case of women, who provide a proportionately large amount of residual disease, an additional safeguard is provided in Section 9 of the Industrial Refuges Act, which prohibits release until such time as the inmate is non-infective.

Residual disease without persistence of any large degree of infectivity at the time release is entertained may be dealt with on its merits. If, in the opinion of the medical officer of the penal institution, the patient can be released with reasonable safety, the officer may so recommend on condition that the person place himself forthwith under the direction of the medical officer of health of the municipality to which he is proceeding.

USE OF FORMS AND RELATED CONSIDERATIONS

Service of any of the forms prescribed for use under the Act may be validly completed by addressing them, by registered mail, to the last known address of the person for whom intended (Regulation (u)). Personal service, on the other hand, of Forms I V.D. and IV V.D. has value. It provides a contact between recipient and the one so detailed, giving opportunity for advice or for impress of the need to obey the order; furthermore, it enables the return of identifying data for the event of disputed service.

To proceed to serve Form IV V.D. the local authority must have in its possession a diagnosis over a physician's signature, preferably on a Form III V.D.

The full value of a Form III V.D., or of its equivalent, expires at the end of one year, as may be deduced from the text of Regulation (s). Needless to say, in completing either the examining physician, not the Laboratory, makes the diagnosis. Wassermann and smear findings do not in themselves constitute a diagnosis.

The purposes of Forms I V.D. and IV V.D. entail more than compliance with the primary orders contained. The recipient must, in addition, as the circumstances demand, deliver within a stated time a certificate of result of examination, or at stated intervals a certificate of required treatment. Delivery of return reports to the medical officer of health is the personal responsibility of the person concerned, not of the physician whose assistance is sought.

The use of the three portions of Form VI V.D. requires no further comment.

RESTRAINT OF GOSSIP AND SLANDEROUS UTTERANCES—STRICT SECRECY AS ENJOINED BY THE ACT

The Act (Section 9) in no uncertain terms prohibits utterances, written or verbal, on the part of anyone, which would convey or imply that another has been in any way dealt with under the provisions of the Act. Those permitting themselves this indulgence not only court the penalties provided, but run, it would seem, the risk of becoming defendants in a suit for recovery of damages.

Chief among the exceptions (Subsection 2) to this prohibitory provision are disclosures made in good faith to the medical officer of health, or those which in the same spirit pass between medical officer of health and a physician, or between physicians relative to cases of mutual interest.

Everyone employed in the administration of the Act is enjoined to strict

secrecy with regard to all matters which may come to his knowledge in the course of such employment, and shall not communicate any such matter to any other person, except in the performance of his duties under the Act (Section 11). Performance of one's duties under the Act in the interests of the Act, *and it alone*, resolves itself into a more or less definitely circumscribed sphere of activity. There are times when one might wish for a slackening of this provision, but actually its value greatly outweighs the difficulties which it presents. The one who is engaged with the administration of the Act is constantly assailed from every quarter for information, not often because of the curiosity of the enquirer but because of the value of such information in solving and sometimes in exploiting the difficulties arising from human relationships of other sort. The lay mind and the legal mind have as yet by no means removed any considerable portion of the stigma from venereal disease, and only too often, were the existence of disease made known, would the victim be unfairly dealt with.

Exception to the secrecy requirements is provided in Regulation (t), which permits communication by those engaged in administration when so authorized by the medical officer of health. The circumstances under which this may be justifiably permitted remain undefined—no one will apparently venture an opinion—and as a result medical officers of health are loath to exercise the prerogative, and rightly so. Happily most difficulties which seem insurmountable in the face of required secrecy may be in some way circumvented, sometimes of course very awkwardly and sometimes at the cost of endless endeavour.

Proceedings in Camera

All proceedings for the recovery of penalties under the Act, except those for unlawful advertisements, etc. (Section 6), shall be conducted in camera, and no report of such proceedings

shall be published in any newspaper (Section 10).

OTHER FEATURES OF THE ACT AND ITS ADMINISTRATION

Children under Sixteen Years of Age

Every obligation or penalty imposed with respect to a person under sixteen years of age must be assumed by the father or by the mother, and in the absence, illness or incapacity of these, by the person having for the time being the custody of such child (Section 3, Subsection (8)).

Hospitals

Every hospital, with exception of hospitals for the exclusive treatment of children, and isolation hospitals receiving communicable diseases as defined by the Public Health Act, must provide for reception of cases of venereal disease (Regulation (o)).

By authority of Regulation (p), every hospital, which is required to receive, shall be deemed a place of detention and isolation for the reception and treatment of cases of venereal disease.

Duties of the superintending officers of hospitals are defined in the Act and Regulations, and do not differ greatly from those of others who by virtue of office or profession must assume responsibilities in the administration of the Act.

Cure and Non-Infectivity

These are not identical. In gonorrhoea it may be assumed that they arrive at the same time. This is not so in syphilis, in the case of which non-infectivity may precede cure by an interval of any length. As a technical variation it would seem that the syphilitic female occupies a less fortunate position than the male, for although considered incapable of infecting a member of the external world, she may, if in the child-bearing age, be capable of infecting offspring.

Authority under the Act ceases strictly only when non-infectivity is

declared by a legally qualified medical practitioner.

Clinics

The Regulations have provided for the establishment of clinics for diagnosis and treatment of venereal disease and in the course of the years such centres have become located at various points throughout the province. Unlike most clinics they do not feature indigence as a measure of admission. They occupy a valuable place in the program for control of venereal disease. The magnitude of the problem justifies their existence despite the thought that they may have, to some extent, destroyed a lucrative field for private practice. Moreover, because we have to think in terms of the physical and mental

fibre of our nation we must provide against the excuse, or the actuality, of inadequacy of funds of the individual to carry out what may be prolonged or necessary treatment.

The Province assumes a large portion of the cost of these clinics. Its participation is economically sound for it is known that there is no group of diseases which, more than the venereal diseases, replenishes the recruits for those institutions which are a direct burden on the Provincial Government.

A concluding word, it is suggested that every physician, lawyer, or administrator would do well to familiarize himself thoroughly with the provisions of the Venereal Diseases Prevention Act and its Regulations.

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AN INTERNATIONAL HEALTH MEETING

FOR the first time the Canadian Public Health Association has the privilege of welcoming to Canada the State and Provincial Health Authorities of North America and the members of the American Public Health Association in the western United States, and of joining with them in a series of important meetings in Vancouver during the week of June 22nd. Associated in these plans is the Canadian Tuberculosis Association.

Prominent in the thought of each of the associations in accepting the invitation to meet in Vancouver was the desire to express appreciation of the services to public health of Dr. H. E. Young, LL.D., who for almost thirty years, first as Minister of Education and Provincial Secretary and subsequently as Provincial Health Officer, has developed the public health program in the province and contributed largely to the advancement of preventive medicine on this continent. Dr. Young was honoured by the State and Provincial Health Authorities in being elected President and was similarly honoured by the Western Branch of the American Public Health Association. Throughout Canada he is recognized as the Dean of Canadian health officials and one of the outstanding leaders in public health.

The importance of an annual conference of public health administrators and those associated in the work of health departments and voluntary agencies is recognized. It is the objective of the Canadian Public Health Association that such annual meetings be arranged in the various provinces and it is of interest to record that such meetings are held in Nova Scotia, Ontario, Saskatchewan, and Alberta. To this number will now be added the British Columbia Health Association, the first meeting of which will be held under the chairmanship of Dr. G. F. Amyot during the convention.

The program for the joint meetings is of exceptional interest. Scientific and commercial exhibits and visits to many centres of public health interest, including the highly efficient Health Department under the direction of Dr. J. W. McIntosh, add greatly to the value of the meeting. The closing session, which will be held in Victoria on the invitation of the Provincial Government, will be one of the delightful features of the convention.

Public Health Week in Vancouver

June 22nd-27th

CANADIAN PUBLIC HEALTH ASSOCIATION

WESTERN BRANCH, AMERICAN PUBLIC HEALTH ASSOCIATION

CANADIAN TUBERCULOSIS ASSOCIATION

STATE AND PROVINCIAL HEALTH AUTHORITIES OF NORTH AMERICA

BRITISH COLUMBIA HEALTH ASSOCIATION

VANCOUVER IN JUNE

DELEGATES and visitors to conventions in Vancouver, British Columbia, have the opportunity of spending a real holiday in one of the most delightful vacation centres in the great Pacific Northwest.

Vancouver, a city beautiful with its parks, sports grounds, bathing beaches and magnificent scenic setting, is the threshold over which one steps into a vast gallery of gorgeous landscapes—Canada's Evergreen Playground.

Preparations, now under way, will make this city long remembered by convention delegates this summer, and by hundreds of thousands of other tourists, for Vancouver celebrates its Golden Jubilee year with a most attractive program of entertainment features.

From July 1st to September 7th, every day will be marked with some event of major interest and the entire period of festivity will be an eloquent expression of Vancouver's pride in the growth and development that have made it Canada's third city and a leading world seaport.

A complete calendar of field and track events with aquatics and regattas, championships and celebrities will appeal to every taste in athletic achievement. And in addition to these

Jubilee features, the facilities for the sports-minded tourist are excellent.

Public tennis courts amid picturesque surroundings are available in almost every quarter in the city, while golf courses, maintained as public links or open to tourists who are members of similar clubs elsewhere, provide good sport and panoramas that would be difficult to excel.

The Canadian tennis championships will be one of the outstanding Jubilee sports attractions as well as a professional golf tournament for a purse of \$5,000.00, which is expected to attract the best golfers on the continent.

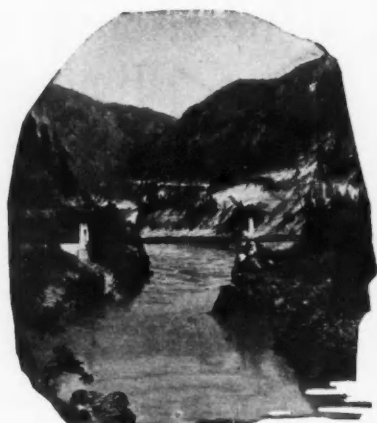
And for those who derive complete vacation satisfaction in the quietness of great evergreen trees, sun-splashed rocks, a blue sky and clear pools, where the only sound is the swish of a well-cast fly, then fishing in the innumerable rivers, lakes and inlets adjacent to Vancouver is the answer.

But for more thrilling events will be the air show of spectacular performances and the racing season. On three tracks, in five meets from July 1st to August 22nd, the sport of kings will claim many devotees.

To thoroughly enjoy a stay in Vancouver, local and side trips may be



GEORGIA STREET LOOKING WEST



ALEXANDRA SUSPENSION BRIDGE

easily alternated with the Jubilee features, which are too numerous and diversified for detailed mention.

Stanley Park, covering one thousand acres of huge trees, centuries old, lovely gardens and recreational areas, has a seven-mile sea drive that inspires other sightseeing tours and gives a

glimpse of islands in a vast expanse of water that must be explored on boat trips into the fascinating fjords of the coast.

Marine Drive, past popular bathing beaches, the North Shore Marine Drive to summer resorts with turnings off into a realm of rugged moun-



TUNNEL NEAR BOSTON BAR



TOTEM POLES, STANLEY PARK

tain and canyon grandeur, are trips that must be made if Vancouver is to be truly appreciated.

Then, for longer drives, there is the road to Harrison Hot Springs—the Spa of Canada and centre of a fine fishing and game country with incomparable scenery and facilities for sports.

The Cariboo Highway, thoroughly modernized, remains a monument to the genius and determination of the Royal Engineers who cut the original trail during the hectic gold rush days, and reveals the magnificent wild beauty of one of the finest big game preserves on the continent.

In striking contrast to the turbulent rivers rushing through forbidding canyons, the towering peaks of mountain ranges and great plains of this upper country are the idyllic

scenes of the fragrant orchard land of the Okanagan.

Victoria, the Parliament Buildings—Butchart's Gardens—Qualicum Beach—Campbell River and the famous Malahat Drive are but a few of the highlights of beautiful Vancouver Island, which is traversed by fine highways and which has many attractive inns and stopping places. It is easily reached by any of a half dozen ferry services.

Excellent rail facilities serve Banff, Jasper, Lake Louise, Mt. Robson and other points in the Canadian Rockies and fine highways extend through the interior of the province. Alaska, "Land of the Midnight Sun", is full of historic interest. Popular vessels operate on frequent service through the famous "Inside Passage" to Skagway, with connections for Yukon points. Shorter trips are also offered along this rugged coastline.



ROAD NEAR HARRISON



SIWASH ROCK, STANLEY PARK

PUBLIC HEALTH SERVICES IN VANCOUVER

THE city of Vancouver has a population of 246,593. With the adjoining municipalities, the total population of the Vancouver area is 320,000. Consideration is being given to a plan for the establishment of a metropolitan board to co-ordinate the health services of Vancouver and the smaller cities and municipalities. The area would comprise two cities and five municipalities and two districts at present under the direction of the Provincial Board of Health. The Medical Officer of Health of the city is J. W. McIntosh, B.A., M.B., D.P.H. The Assistant Medical Officer is E. D. Carder, B.A., M.B., who serves also as Epidemiologist and is in charge of the Division of Child Hygiene. Alderman A. G. Harvey is chairman of the Health Committee of the City Council. School medical services are provided by the Department of Education.

Vancouver has an enviable health record. The average general death rate for the past five years is 9.2 per 1,000 of population, and for residents, 8.2. The average birth rate for the same period is 14.7 per 1,000 population. The infant mortality rate, which is always a good index of the health conditions of the community, was 23.5 in 1934 and 27.6 per 1,000 live births in 1935. The maternal mortality rate is low, namely 3.3 per 1,000 live births.

COMMUNICABLE DISEASE CONTROL

The organization of the division consists of the epidemiologist and a quarantine staff of a chief and three assistant officers, with the necessary ambulance service. Isolation hospital facilities are provided in a modern building adjacent to the Vancouver General Hospital operated by the Hospital Board. The city is responsible for the payment of any deficit. The hospital is constructed on the cubicle system and contains 105 beds, and in addition observation wards. The upper floor, providing 35 beds, is at present used for the treatment of cases of tuberculosis.

An active campaign of immunization against diphtheria is conducted with particular reference to preschool children, utilizing Well Baby clinics and visits of nurses to homes. In the schools the epidemiologist conducts a continuous campaign, visiting in rotation the various schools and co-operating with the School Medical Department. In 1929 529 cases of diphtheria were reported, in contrast to 1935, when only 9 cases were recorded. Vaccination against smallpox is continuously offered and every effort made to obtain the maximum number of vaccinations. In spite of the outbreak of smallpox which occurred a few years ago and of a recent occurrence of what might have proved a serious outbreak in December, 1935, the efforts towards effective vaccination of the population are not as productive as is the campaign for immunization against diphtheria.

PUBLIC HEALTH NURSING

The staff of public health nurses numbers 11—one supervising nurse for child welfare, one supervising nurse for tuberculosis, and 9 district nurses whose duties relate both to child welfare and tuberculosis work in their respective districts.

Child Hygiene

Well Baby clinics are held weekly with an average attendance of 32 per clinic. New babies admitted during 1935 numbered 1,066, constituting more than 30 per cent of the total births registered during the year. There are on record for visiting purposes 2,080 infants and 3,959 preschool-age children, a total of 6,039. Only well babies are admitted to these clinics, where they are weighed and measured. Feedings are checked and general advice is given to the mothers. In any condition requiring medical attention, the mother is directed to take the child to the family physician, or, if unable to consult a physician, to the clinic at the Vancouver General

Hospital, which is also attended by the public health nurses.

Supervision is maintained over boarding homes for infants under the age of 7 years. A permit must be obtained from the Medical Officer of Health before a foster home may be conducted. Such homes are inspected from time to time and visited by the public health nurses.

TUBERCULOSIS CONTROL

Of particular interest is the plan of tuberculosis control which is being developed under the direction of Dr. W. H. Hatfield. In January, 1932, all the various tuberculosis activities undertaken in the city, including the Rotary Clinic, inaugurated by the Rotary Club of Vancouver, the clinic at the Vancouver General Hospital, and the nursing services, were combined under the Medical Officer of Health and the clinic work centralized in new quarters in the Vancouver Public Health Institute for Diseases of the Chest. The resultant co-ordination of effort produced immediate results. Many more cases were brought to light with their resultant contacts and suspects, all of whom were put under observation and examined. In 1930 only 198 cases were reported, while in 1933 there were 778. The death rate dropped from 86.4 per 100,000 in 1931 to 63.8 in 1935. The work of public health nurses constitutes an important part of the anti-tuberculosis program. During 1935 the nursing staff made 17,547 visits in connection with tuberculosis control, representing about one-half of the nursing visits made.

Further development occurred in October, 1935, when the Provincial Board of Health took over and co-ordinated all the tuberculosis activities in the province and appointed Dr. W. H. Hatfield as Medical Director of the Division of Tuberculosis Control with headquarters in Vancouver. The scheme includes the erection of a new hospital unit in Vancouver which in addition to affording 65 more beds

will provide general quarters for the Vancouver clinic, district nurses, social service, general offices, etc. This unit will become, when completed, the hub of the whole anti-tuberculosis program for British Columbia, and it is felt that its completion will be one of the greatest forward steps taken, from a preventive aspect of disease, in this province.

Of interest also is the splendid preventorium which was opened in 1931. It represents the transformation of a building originally erected as an isolation hospital into a modern preventorium with accommodation for about 50 children. The buildings are ideally situated on twelve acres of land. Long verandahs provide ample sleeping accommodation in the open air. Funds to the extent of \$20,000 were made available by the Rotary Club and the Imperial Order of the Daughters of the Empire, which provided for the necessary alterations and equipment. Members of these two organizations, with representatives of seven other service clubs and the City Council, constituted the Board of Governors of the institution. The Kinsmen Club of Vancouver arranged for the laying out of the grounds and their maintenance and provided also a concrete wading pool.

The Board of Directors will be very glad to welcome any delegates to inspect the preventorium.

LABORATORIES

All bacteriological work required by physicians in the city is conducted at the Provincial Board of Health Laboratory. This laboratory was established in Vancouver in connection with the venereal disease control program of the Provincial department of health. The laboratory is maintained jointly by the Provincial Government and the City. The director is Dr. C. E. Dolman, who is also head of the Department of Bacteriology and Preventive Medicine and the Department of Nursing and Health in the University of British Columbia.

Meat and Food Division

The milk supply of Vancouver is from the Fraser Valley, which constitutes a "restricted area". All cattle in this area have been tuberculin-tested and are retested at regular intervals. Provincial inspectors carry out inspection of all dairy farms in accordance with the Provincial Regulations and reports of these are received by the Medical Officer of Health at frequent intervals. Dairy farms are graded and a very marked improvement has been indicted, as only a very small percentage of the farms is now placed in class "C". Inspection of all milk offered for sale in Vancouver, including supervision of pasteurization plants, stores, etc., is conducted by municipal inspectors. Approximately 89 per cent of the milk sold is pasteurized.

In connection with the Milk and Food Division the City Health Department maintains a laboratory in charge of Mr. John F. C. B. Vance, City Analyst. In addition to the usual responsibilities of such a laboratory, Mr. Vance is inspector in charge of the Police Bureau of Science and conducts examinations of a medico-legal interest. An interesting series of medico-legal exhibits is on view in this laboratory.

All meat sold in Vancouver is required to be examined and stamped either by the Dominion or by City veterinarians at the abattoirs. Carcasses of animals killed outside the city are required to be examined and stamped at one of the abattoirs before sale. To such carcasses must be attached the essential organs for examination.

Water Supply

An area 300 square miles in extent, including the city of Vancouver, receives its water in bulk from the Greater Vancouver Water District and each municipality or city does its own distribution. Vancouver boasts a pure, soft, clear and palatable water unadulterated by chemicals. The supply comes from Capilano River, Seymour River or Coquitlam Lake, the catchment area of each being either prac-



CAPILANO RIVER

tically all owned or reserved by the District. With the exception of two caretakers there is no human occupation or habitation of the watersheds. No one may enter the watersheds for fishing, hunting, hiking or prospecting, and lumbering operations have been completed.

When fully developed the Capilano and Seymour alone can supply 400 million gallons per day, 300 million of that within four miles from the city, and the cost is estimated not to exceed 10 or 12 dollars per million gallons.

By the kindness of Mr. E. A. Cleveland, Chief Commissioner of the Greater Vancouver Water District, arrangements have been made to take those who are interested to the Intake on Seymour Creek, a place of great natural beauty, where Mr. Cleveland will give a short address on the water supply of the district.

A cordial invitation to all who may contemplate attending the convention is extended by Vancouver's Medical Officer of Health, Dr. J. W. McIntosh. Every effort will be made to make the visit worth while so far as the Health Department can be of assistance.

—C. E. Birch.

WESTERN BRANCH, AMERICAN PUBLIC HEALTH ASSOCIATION

THE Western Branch of the American Public Health Association, which is holding its seventh annual meeting this year in Vancouver, was organized on June 18, 1928. Its purpose is to foster acquaintance between public health personnel; to facilitate exchange of Western public health experience; to exchange opinion and experience with Eastern colleagues; to assist in building public opinion for the support of Western health activities. From 125 members in 1928, it has grown to 1,628. Of these members, 123 are Fellows of the American Public Health Association, 371 are active members of that Association, and 1,134 are regional members of the Branch. Members of the American Public Health Association and its affiliated societies are automatically considered members of the Western Branch. The territory of the Branch covers the Territories of Alaska and Hawaii, British Columbia, Washington, Oregon, California, New Mexico, Arizona, Nevada, Utah, Colorado, Wyoming, Idaho, Montana, and the Philippine Islands. This Branch has no paid executives or staff. All its work is done through the voluntary activities of its officers and its standing and special committees.

Among the special committees of the Western Branch engaged in current public health problems and expected to report at the Vancouver meetings are the following: A Committee on Sylvatic Plague, of which Dr. Karl F. Meyer, Director of the Hooper Foundation for Medical Research, University of California Medical School, San Francisco, is Chairman. This Committee was appointed last year by the Western Branch after it was discovered that plague infection was not confined to the ground squirrel of California but was also prevalent in other rodents and in other States, even extending across the Sierra-Nevada Mountains. The Committee is correlating the research on this sub-

ject in the Western States, keeping local and state health officers informed, preparing publicity, and studying desirable and economical control measures. Another is the Committee on Health Education Methods, of which Mr. Louis Olsen, City Health Officer of Palo Alto, California, is Chairman. This group made an excellent report on the use of radio in health education at the last meeting in Helena, Montana, and it is expected that they will bring in an amplified report this year with special attention to public health museum methods. Another is a Committee on Public Relations, of which the Chairman is Dr. Walter H. Brown, Professor of Hygiene, Stanford University, California. This committee keeps currently informed on changing public health administrative problems throughout the West and serves as a clearing house for health officials, who are having legislative and administrative problems.

From its earliest beginning, even before 1928, Canadian public health men, particularly in British Columbia, have been active supporters of the Western Branch. Dr. H. E. Young, Provincial Health Officer of British Columbia, was honored this year by unanimous election to the office of the President-Elect of the Western Branch and will be inducted as President at the Vancouver meetings.

The officers of the Western Branch this year are: President: Dr. W. F. Cogswell, State Health Officer of Montana, Helena; President-Elect: Dr. H. E. Young, Provincial Health Officer of British Columbia, Victoria; Vice-President: Dr. J. D. Dunshee, State Health Officer of Idaho, Boise; Vice-President: Dr. J. L. Jones, State Health Officer of Utah, Salt Lake City; Vice-President: Dr. W. H. Kellogg, Director of State Hygienic Laboratory of California, Berkeley; Secretary: Dr. W. P. Shepard, Assistant Secretary, Metropolitan Life



OFFICERS OF THE WESTERN BRANCH

1. Dr. H. E. YOUNG, LL.D., President-Elect. 2. Dr. W. F. COGSWELL, President.
 3. Dr. J. L. JONES, Vice-President. 4. Dr. W. H. KELLOGG, Vice-President. 5. Dr.
 J. D. DUNSHEE, Vice-President. 6. Dr. W. P. SHEPARD, Secretary. 7. Dr. W. F.
 HIGBY, Treasurer. 8. Mr. FRED STIMPFT, Chairman, Executive Committee.

Insurance Company, San Francisco; Treasurer: Mr. W. F. Higby, Executive Secretary, California Tuberculosis Association, San Francisco;

Chairman of the Executive Committee: Mr. Fred Stimpert, Director, State Hygienic Laboratory, Helena, Montana.

CANADIAN TUBERCULOSIS ASSOCIATION

WHEN the Canadian Tuberculosis Association convenes in Vancouver in June it will be for the thirty-sixth annual meeting of this, Canada's oldest voluntary agency for the promotion of public health. The Association therefore is reaching that maturity which justifies a retrospective view of its activities through the years and an evaluation of the progress which it may reasonably claim to have stimulated.

In 1900 when this Association was formed, there was no definite tuberculosis program either provincial or federal. What work was being done was sponsored by interested individuals, but with no unifying central organization, and a consequent confusion of standards. The chief task, therefore, was the co-ordinating of these units and the stirring of the public to provide the funds whereby greater efforts might be made and higher standards set. As a direct result of this education propaganda we have in Canada to-day 8,300 treatment beds as compared with less than 200 in 1900, an increase of more than four thousand per cent.

This tremendous increase in facilities for treatment has been reflected in an equally satisfactory decrease in the tuberculosis death rate, which in 1900 was about 200 per 100,000 and to-day is 59.3. This steadily decreasing death rate has been the subject for much quiet satisfaction on the part of those connected with the Canadian Tuberculosis Association. Further cause for satisfaction is found in the fact that three provinces to-day have each a provincial director who supervises and co-ordinates the tuberculosis work of the province as a whole.

Perhaps the greatest stride of all has been the public's gradual acceptance of its responsibility for providing

treatment for those who are unable to provide it for themselves. The degree to which this responsibility has been accepted ranges from those provinces in which the government contributes forty cents per day towards the treatment of each patient, to the two provinces which treat all of their tuberculous entirely at the expense of the taxpayer.

While the public's attitude towards tuberculosis has changed from one of fatalism which bred apathy, to one of hope which breeds action, the tuberculosis worker's conception of the important things to stress has also changed. In 1900 the slogan was "Tuberculosis is curable". In 1936 it is "Tuberculosis is preventable". These slogans epitomize the change in the mode of attack on the disease. Treatment was emphasized in 1900, prevention in 1936.

As a result of this change of emphasis, to-day we find regular tuberculosis clinics in practically every city in Canada. Supplementing these are many more in smaller towns, while every province has travelling diagnosticians who visit districts remote from traffic centres. In viewing the situation in 1936 in comparison with 1900, it would seem unnecessary that any Canadian needing the attention of a tuberculosis clinic or sanatorium should be without it.

During the past ten years an important project has been the promoting of the sale of Christmas seals. This is a Dominion-wide activity, raising funds for use in preventive work. The funds thus raised are spent in the districts from which they are drawn, ambitious preventive programs being sponsored under reliable direction.

The Association also does considerable work in health education, distributing quantities of literature for

both school children and adult groups. More and more attention is being focused on groups of young people in Normal Schools, Universities and industry, in the hope that intensified

collecting of reliable information and making it available to all interested groups.

The Association has always been staunchly befriended and strongly



DR. R. G. FERGUSON

Director of Medical Services and General Superintendent, Saskatchewan Anti-Tuberculosis League, Fort San, Sask.; President, Canadian Tuberculosis Association.



DR. W. H. HATFIELD

Medical Director, Division of Tuberculosis Control, Provincial Board of Health, B.C.; Medical Director, Vancouver Public Health Institute for Diseases of the Chest.

efforts in the young adult age-group will result in a cut in the death rate in this group which has been a relatively untouched problem.

Industrial surveys and demonstrations have been carried on in various parts of Canada at different times, pointing the direction which should be pursued by local efforts. Research work is also sponsored each year and the results made available.

The Canadian Tuberculosis Association is also the connecting link between the various provincial programs, no small part of its work being the

supported by governments, both federal and provincial, and public-spirited bodies throughout Canada. At the forthcoming Thirty-sixth Annual Meeting representatives from any of these bodies of interested people will be warmly welcomed.

Though in comparison with 1900 the above recitation of accomplishments sounds imposing, yet the fact that nearly 6,500 Canadians still die yearly from this preventable disease demonstrates that though the enemy is in retreat he is by no means routed and consequently much remains to be done.

BRITISH COLUMBIA PUBLIC HEALTH ASSOCIATION AND CANADIAN PUBLIC HEALTH ASSOCIATION

IT is interesting to recall the early efforts made to provide the opportunities for an annual discussion by health officers of the many problems presented in health administration in Canada. The first association of medical officers of health was effected in

Ontario in 1886 through the leadership of the late Dr. Peter H. Bryce, then secretary of the Provincial Board of Health. Its organization was undoubtedly influenced by the valuable work accomplished by the American Public Health Association which at its

fifteenth meeting in 1885 had formally enlarged its membership to include Canadian representatives. Unfortunately the Ontario association did not continue to function, the meetings being discontinued a few years later. It was not until 1912 that the Ontario Health Officers' Association was re-established and provision made for the attendance of all health officers by an amendment to the Public Health Act. Subsequently the Nova Scotia Health Officers' Association, the Saskatchewan Health Officials' Association, and the Alberta Health Officials' Association were established and have continued actively to serve as provincial associations. Through the co-operation of the Provincial Departments of Health and the officers of these associations, membership was so arranged that these bodies became an integral part of the Canadian Public Health Association.

The organization this year of a provincial association of medical officers of health, public health nurses, and other members of health departments and voluntary agencies in British Columbia is the logical outcome of the manifest interest of a



DR. J. W. MCINTOSH

Medical Officer of Health, Vancouver;
President, Canadian Public Health Association.

large group which have, through monthly meetings in Vancouver during the past two years, found the value of discussing problems of mutual interest, particularly in the field of health education. Prominent in the organization of the new British Columbia Public Health Association are Dr. H. E. Young, LL.D., who will serve as Honorary President; Dr. G. F. Amyot, President; Dr. R. Felton, Vice-President; Miss Margaret Kerr, Secretary; and Mrs. E. Mahon, Dr. W. H. Hatfield, Mr. J. R. Pyper, and Miss Elizabeth King, Executive.

The twenty-fifth annual meeting of the Canadian Public Health Association will be the second occasion on which the Association has met in Vancouver. The growth of the Association in the sixteen years which have intervened between these two meetings is reflected in the membership, which now exceeds 2,600, and in the organization of the work in nine Sections offering the opportunity for those engaged in vital statistics, public health nursing, laboratory work, public health engineering, industrial hygiene, mental hygiene, public health education, child hygiene, and social hygiene to make substantial contributions.



DR. G. F. AMYOT

Medical Officer of Health, North Vancouver;
President, British Columbia Public Health Association.

STATE AND PROVINCIAL HEALTH AUTHORITIES OF NORTH AMERICA

THE Conference this year of the State and Provincial Health Authorities of North America will be the fifty-first conference. For half a century the Conference has afforded the opportunity for discussion by



DR. EARLE G. BROWN

Secretary, State Board of Health of Kansas; Vice-President, State and Provincial Health Authorities.

public health administrators of pertinent problems. It has included in its membership the executive health officers of states and territories of the United States, of the provinces of the Dominion of Canada, and of Newfoundland. In addition to the presentation of papers on various aspects of public health administration, the Conference receives reports from committees which function during the year. These committees include Tropical and Subtropical Public Health, Child Hygiene, Indian Affairs, Industrial Hygiene, Federal Relations, Conservation of Vision, Milk, Sanitary Aspects of Interstate Transporta-

tion and Uniform Railway Code, and Transportation of the Dead.

The Conference has been pleased to honour a number of those who served as state or provincial officers by making them honorary life members. The following have been so honoured: Dr. J. A. Amyot, Ottawa; Dr. J. T. Black, Pittsburgh; Dr. H. M. Bracken, Claremont, Cal.; Dr. Thos. R. Crowder, Chicago; Dr. S. J. Crumbine, New York; Dr. C. St. Clair Drake, Jacksonville, Ill.; Dr. John A. Ferrell, New York; Dr. A. W. Freeman, Baltimore; Dr. Chas. W. Garrison, Lexington, Ky.; Dr. W. S. Leathers, Nashville, Tenn.; Dr. J. W. S. McCullough, Toronto; Dr. A. J. McLaughlin, Washington; Dr. Matthias Nicoll, Jr., White Plains, N.Y.; Dr. R. M. Olin, East Lansing, Mich.; Dr. W. S. Rankin, Charlotte, N.C.; Dr. B. U. Richards, Pawtucket, R.I.; Dr. Mark W. Richardson, Newton, Mass.; Dr. W. F. Snow, New York; Dr. T. D. Tuttle, Chula Vista, Cal.; Dr. Olin West, Chicago, Ill.; and Dr. Wm. W. Woodward, Chicago, Ill.

The President of the Conference is Dr. H. E. Young, Provincial Health Officer, Victoria, B.C. Dr. Earle G. Brown, Secretary of the State Board of Health, of Kansas, is Vice-President, and Dr. A. J. Chesley, Executive Officer, State Board of Health of Minnesota, is Secretary-Treasurer. Dr. S. J. Crumbine, General Executive of the American Child Health Association, New York, is Field Secretary.

The Conference will hold a dinner and evening meeting on Monday, June 22nd, and an afternoon session on Tuesday.

PRELIMINARY PROGRAM

General Directory of Sessions

Monday, June 22nd

- 9.00 a.m.—Registration, Canadian Tuberculosis Association.
- 9.30 a.m.—Canadian Tuberculosis Association, clinical papers—Wedgewood Room.
- 2.30 p.m.—Canadian Tuberculosis Association, clinical session—Vancouver Public Health Institute for Diseases of the Chest.
- 7.00 p.m.—Canadian Tuberculosis Association, dinner and executive meeting.
State and Provincial Health Authorities of North America—dinner and evening meeting.

Tuesday, June 23rd

- 9.30 a.m.—Canadian Tuberculosis Association, clinical papers—Wedgewood Room.
- 12.30 p.m.—Canadian Tuberculosis Association, luncheon and annual meeting.
- 2.30 p.m.—Canadian Tuberculosis Association, clinical papers—Wedgewood Room.
- 2.30 p.m.—State and Provincial Health Authorities of North America, general session.
- 4.00 p.m.—Canadian Tuberculosis Association, visit to Preventorium and tea.
- 7.00 p.m.—Canadian Public Health Association, dinner and annual meeting—Room 201.
- 7.30 p.m.—Canadian Tuberculosis Association, meetings of committees.

Wednesday, June 24th

- 8.00 a.m.—Registration, Canadian Public Health Association and Western Branch, American Public Health Association.
Breakfast meeting, all associations—Oak Room.
- 10.15 a.m.—All associations, general session—Oak Room.
- 12.30 p.m.—All associations, joint luncheon.
- 2.00 p.m.—Western Branch, American Public Health Association, business meeting.
- 3.00 p.m.—All associations, trip to Seymour Creek Intake.
- 8.00 p.m.—Public meeting—Ballroom.

Thursday, June 25th

- 8.00 a.m.—Western Branch, American Public Health Association; breakfast, Regional Board.
- 9.00 a.m.—Canadian Public Health Association and Western Branch, American Public Health Association, joint session—Oak Room.
- Section Meetings, Canadian Public Health Association:
Vital Statistics and Epidemiology—Wedgewood Room.
Public Health Nursing—Italian Room.
- 12.30 p.m.—All associations, joint luncheon.
- 2.30 p.m.—Canadian Public Health Association and Western Branch, American Public Health Association, general session—Oak Room.

Friday, June 26th

- 8.00 a.m.—Western Branch, American Public Health Association; breakfast, Regional Board.
- 9.00 a.m.—Section Meetings, Canadian Public Health Association:
Vital Statistics and Epidemiology—Wedgewood Room.
Laboratory.
British Columbia Public Health Association and Public Health Education Section, Canadian Public Health Association, joint meeting—Italian Room.
Western Branch, American Public Health Association—Oak Room.
- 11.15 a.m.—Western Branch, American Public Health Association, business meeting.
- 12.30 p.m.—All associations, joint luncheon.

2.30 p.m.—Canadian Public Health Association, Western Branch, American Public Health Association, and Canadian Tuberculosis Association, joint session—Oak Room.

5.30 p.m.—Western Branch, American Public Health Association, business meeting.

7.30 p.m.—Western Branch, American Public Health Association, annual dinner and business meeting—Wedgewood Room.

7.30 p.m.—Canadian Public Health Association, papers, reports, etc.—Oak Room.

Midnight—Boat leaves for Victoria.

Saturday, June 27th—Victoria

9.15 a.m.—Reception, Parliament Buildings.
Visit to points of interest.

Monday Morning, June 22nd

CANADIAN TUBERCULOSIS ASSOCIATION

Registration.

9.30 a.m.—Wedgewood Room

Chairman—Dr. R. G. Ferguson, President.

1. Respiratory Efficiency—Report of research under Kinsmen Fellowship for the year—Drs. Palmer and James.
2. Silicosis—Dr. P. W. Barker.
3. Survey of Tuberculous Patients in the Home—Dr. William Morris.
4. Pneumothorax—Staff of Tranquille Sanatorium.
5. Exercise in Treatment of Tuberculosis—Dr. Frederick Kincaid.

Monday Afternoon, June 22nd

CANADIAN TUBERCULOSIS ASSOCIATION

2.30 p.m.—Vancouver Institute for Diseases of the Chest

Demonstration of the work of the Division of Tuberculosis Control, Provincial Board of Health of British Columbia.

Address, Tuberculosis in British Columbia—Dr. W. H. Hatfield.

Monday Evening, June 22nd

CANADIAN TUBERCULOSIS ASSOCIATION

7.00 p.m.

Dinner and Executive Meeting.

STATE AND PROVINCIAL HEALTH AUTHORITIES OF NORTH AMERICA

7.00 p.m.

Dinner and Evening Meeting.

Tuesday Morning, June 23rd

CANADIAN TUBERCULOSIS ASSOCIATION

9.30 a.m.—Wedgewood Room

1. Surgery in Tuberculosis—Dr. R. C. Matson.
2. Factors Influencing Choice of Treatment of Pulmonary Cavity—Dr. F. M. Pottenger.
3. Surgery in a Sanatorium—Dr. E. L. Ross.

12.30 p.m.

Luncheon and Annual Meeting.

Tuesday Afternoon, June 23rd**CANADIAN TUBERCULOSIS ASSOCIATION****2.30 p.m.—Wedgewood Room**

1. Progress Report of Tuberculosis among the Indians of Canada—Dr. E. L. Stone.
2. Need for Uniformity in Tuberculosis Records and Statistics—Dr. G. J. Wherrett.
3. Rural Municipal Surveys for Case-Finding Purposes—Staff of the Saskatchewan Anti-Tuberculosis League.

4.00 p.m.

Visit to Preventorium and afternoon tea.

STATE AND PROVINCIAL HEALTH AUTHORITIES OF NORTH AMERICA**2.30 p.m.**

General Session.

Tuesday Evening, June 23rd**CANADIAN PUBLIC HEALTH ASSOCIATION****7.00 p.m.—Room 201**

Dinner and Annual Meeting, Executive Council.

CANADIAN TUBERCULOSIS ASSOCIATION**7.30 p.m.**

Meetings of Committees: Christmas Seal.
Standardization of Records and Reports.
Constitution.

Wednesday Morning, June 24th**ALL ASSOCIATIONS****8.00 a.m.**

Registration, Canadian Public Health Association and Western Branch, American Public Health Association.
Breakfast.

9.30 a.m.—Oak Room

Chairman—Dr. J. W. McIntosh, President, Canadian Public Health Association.
1. Invocation—His Grace, the Archbishop of British Columbia (The Most Rev. A. U. DePencier).
2. Address of Welcome—His Worship Mayor G. G. McGeer, K.C., M.P.
Response—Dr. Walter H. Brown, Leland Stanford University; President, American Public Health Association.

10.15 a.m.—Oak Room (General Session)

Chairman—Dr. J. W. McIntosh, President, Canadian Public Health Association.
Vice-Chairman—Dr. G. F. Amyot, President, British Columbia Public Health Association.
Presidential Addresses:
1. Dr. W. F. Cogswell, Helena, Montana; Western Branch, American Public Health Association.
2. Dr. H. E. Young, Victoria, B.C.; State and Provincial Health Authorities of North America.
3. Dr. J. W. McIntosh, Vancouver; Canadian Public Health Association.
4. Dr. G. F. Amyot, Vancouver; British Columbia Public Health Association.

12.30 p.m.

Joint Luncheon.

Chairman—Dr. Walter H. Brown, Stanford University, California; President, American Public Health Association.

Speakers: Dr. Thomas Parran, Jr., Surgeon General, United States Public Health Service, Washington, D.C.

Dr. J. J. Heagerty, Chief Executive, Asst., Department of Pensions and National Health, Ottawa.

Wednesday Afternoon, June 24th**WESTERN BRANCH, AMERICAN PUBLIC HEALTH ASSOCIATION****2.00 p.m.**

Business Meeting.

Chairman—Dr. W. F. Cogswell, Helena, Montana, President.

ALL ASSOCIATIONS**3.00 p.m.**

Trip to Seymour Creek Intake, where late afternoon supper will be served by the kindness of Mr. E. A. Cleveland, Chairman of the Greater Vancouver Water District.

Address on Vancouver's water supply—Mr. Cleveland.

Chairman—His Worship Mayor G. G. McGeer, K.C., M.P.

Wednesday Evening, June 24th**PUBLIC MEETING****8.00 p.m.—Ball Room**

Chairman—Dr. R. M. Atwater, Executive Secretary, American Public Health Association, New York.

1. The Hon. D. Pattullo, Premier of British Columbia.
2. Title to be announced—The Hon. Dr. George M. Weir, Provincial Secretary and Minister of Health, British Columbia; Honorary President, Canadian Public Health Association.
3. The Eradication of Tuberculosis—Dr. H. A. Farris, Saint John, N.B.

Thursday Morning, June 25th**WESTERN BRANCH, AMERICAN PUBLIC HEALTH ASSOCIATION****8.00 a.m.**

Breakfast, Regional Board.

**CANADIAN PUBLIC HEALTH ASSOCIATION
WESTERN BRANCH, AMERICAN PUBLIC HEALTH ASSOCIATION**

9.00 a.m.—Oak Room

Chairman—Dr. H. E. Young, Victoria, B.C.

1. Bacillary Dysentery, with Special Reference to the Southwest—Dr. A. V. Hardy, Consultant, U.S. Public Health Service, Washington, D.C.
2. Some Recent Developments in Public Health Administration—Dr. Henry F. Vaughan, Commissioner of Health, City of Detroit.
3. Undulant and Malta Fever—Dr. J. L. Jones, State Health Commissioner of Utah, Salt Lake City.

Discussion opened by Dr. M. F. Haralson, Acting Secretary and Executive Officer, Division of Public Health, State of Colorado, Denver.

SECTION MEETINGS, CANADIAN PUBLIC HEALTH ASSOCIATION

Section of Vital Statistics and Epidemiology

9.00 a.m.—Wedgewood Room

Chairman—Mr. H. B. French, Deputy Registrar, Births, Deaths, and Marriages for the Province of British Columbia, Victoria.

1. Chairman's address, Registration in British Columbia—Mr. H. B. French.
2. A Study of Stillbirths—Dr. A. H. Sellers, School of Hygiene, University of Toronto.
3. Infant Mortality in British Columbia—Dr. R. Felton, Medical Health Officer, Victoria, B.C.
4. The Mortality from Cardio-arterio-renal Diseases—Dr. Mary A. Ross, School of Hygiene, University of Toronto.
5. Changes in Specific Mortality Rates between 1921 and 1931 in the older Age-Groups—Mr. W. R. Tracey, Chief, Vital Statistics, Dominion Bureau of Statistics, Ottawa.
6. An Epidemic of Paratyphoid A in Montreal—Dr. A. R. Foley, Epidemiologist, Provincial Bureau of Health, Quebec, and Dr. K. F. Brandon, School of Hygiene, University of Toronto.

Section of Public Health Nursing

9.00 a.m.—Italian Room

Chairman—Miss Elizabeth L. Smellie, C.B.E., Victorian Order of Nurses, Ottawa, Ont.

1. Personnel in Public Health Nursing Services—Dr. G. F. Amyot, Vancouver.
2. Requirements for Employment—Miss Margaret Kerr, Eburne, B.C.
3. Supervision—Miss Alice Ahern, Assistant Supervisor of Nursing, Metropolitan Life Insurance Company, Ottawa.
4. Physical Examination of Nurses before and during Employment—Dr. M. R. Bow, Deputy Minister of Health, Edmonton, Alberta.
5. Staff Education—Miss Kate Brighty, Director of Public Health Nursing, Provincial Department of Health, Edmonton.
6. Summary of Papers—Miss Fyvie Young, Secretary, Division on Maternal and Child Hygiene, Canadian Welfare Council, Ottawa.

12.00 noon—Italian Room

Business meeting.

An invitation is extended by Miss Elizabeth L. Smellie, Chairman of the Section, to the members of the Canadian Public Health Association to afternoon tea from four to six in the Roof Garden.

ALL ASSOCIATIONS

12.30 p.m.—Joint Luncheon

1. State and Provincial Health Authorities' Responsibility in the Field of Industrial Hygiene—Dr. Stanley H. Osborn, Commissioner of Health of Connecticut, Hartford.
2. Title to be announced—Dr. J. G. FitzGerald, Dean of the Faculty of Medicine and Director, School of Hygiene and Connaught Laboratories, University of Toronto.

Thursday Afternoon, June 25th

CANADIAN PUBLIC HEALTH ASSOCIATION
WESTERN BRANCH, AMERICAN PUBLIC HEALTH ASSOCIATION

2.30 p.m.—Oak Room

Chairman—Dr. E. R. Coffey, State Health Officer for Washington, Seattle.

1. Symposium: THE CO-ORDINATION OF MEDICAL PRACTICE WITH PUBLIC HEALTH AS CARRIED OUT IN THE PROVINCES OF MANITOBA, SASKATCHEWAN, AND ALBERTA:
 - (a) Manitoba—Dr. F. W. Jackson, Deputy Minister of Health and Public Welfare, Winnipeg.
 - (b) Saskatchewan—Dr. R. O. Davison, Deputy Minister of Public Health, Regina.
 - (c) Alberta—Dr. M. R. Bow, Deputy Minister of Health, Edmonton.
2. Our Present Position in respect to Venereal Disease Control—Speaker to be announced.
3. Epidemiological and Bacteriological Aspects of Influenzal Control—Dr. John J. Sippy, District Health Office, San Joaquin Local Health District, Stockton, Cal.
Discussion opened by Dr. J. G. FitzGerald, Dean of the Faculty of Medicine and Director of the School of Hygiene and Connaught Laboratories, University of Toronto.
4. Rocky Mountain Spotted Fever—Dr. R. R. Parker, Director, Rocky Mountain Laboratory, U.S. Public Health Service, Helena, Montana.

Friday Morning, June 26th

SECTION MEETINGS, CANADIAN PUBLIC HEALTH ASSOCIATION

Section of Vital Statistics and Epidemiology

9.00 a.m.—Wedgewood Room

Chairman—Mr. H. B. French, Deputy Registrar, Births, Deaths, and Marriages, for the Province of British Columbia, Victoria.

1. Report of the Committee on the Annual Report of the Medical Officer of Health—Dr. D. V. Currey, Medical Officer of Health, St. Catharines, Ont.
2. A Survey of the Use of Diphtheria Toxoid in Ontario—Dr. A. L. McKay, Director, Division of Preventable Diseases, Ontario Department of Health, Toronto.
3. Report of the Committee on Non-resident Births and Deaths—Mr. T. E. Ashton, Statistician, Division of Vital Statistics, Department of Public Health, Toronto.
4. The Influence upon Vital Rates of Certain Changes in Population—Dr. Eschscholtzia L. Lucia, Assistant Professor of Biometry, Department of Hygiene, University of California, Berkeley.
5. A Small Outbreak of Haemorrhagic Smallpox in Vancouver—Dr. J. W. McIntosh, Medical Officer of Health, Dr. E. D. Carder, Assistant Medical Officer of Health, Vancouver; and Dr. C. E. Dolman, Director, Provincial Board of Health Laboratories, Vancouver.
6. Report of the Committee on the Certification of Causes of Death—Dr. R. D. Defries, School of Hygiene, University of Toronto.
Election of officers.

Laboratory Section**9.00 a.m.**

Chairman—Dr. J. H. Orr, Queen's University, Kingston, Ontario.

1. Title to be announced—Dr. C. E. Dolman, Department of Bacteriology and Preventive Medicine, The University of British Columbia, Vancouver.
2. A Filter-passing Virus Isolated from *Dermacentor andersoni*—Dr. Gordon E. Davis, Rocky Mountain Laboratory, Hamilton, Montana.
3. Brucella Infections in British Columbia—Miss V. G. Hudson and Dr. C. E. Dolman, Provincial Board of Health Laboratories, Vancouver.
4. The Use of Apple and Apple Products in the Detoxication Mechanism—Dr. Ira A. Manville, Department of Physiology, University of Oregon Medical School, Portland, Oregon.
5. Incidence and Laboratory Diagnosis of Enteric Infections in British Columbia—Miss M. M. Malcolm and Miss E. M. Allen, Provincial Board of Health Laboratories, Vancouver, B.C.
6. Two Non-typical Cases of Typhoid Fever—Miss D. E. Kerr, Provincial Board of Health Laboratories, Vancouver, B.C.
7. Staphylococcus Toxin Production by Cultures of Bovine Origin—Dr. C. E. Dolman and Mr. W. H. Cockcroft, Connaught Laboratories, University of Toronto.
8. Agglutinins for *B. dysenteriae* Flexner and Sonne in Normal Human Sera—Dr. R. J. Gibbons, Connaught Laboratories, University of Toronto.
9. Film: Microcolonial Growth of Smooth and Rough Forms of *B. dysenteriae*—Dr. R. J. Gibbons, Connaught Laboratories, University of Toronto.

**BRITISH COLUMBIA PUBLIC HEALTH ASSOCIATION
PUBLIC HEALTH EDUCATION SECTION, CANADIAN PUBLIC HEALTH
ASSOCIATION**

9.00 a.m.—Italian Room

Chairman—Dr. G. F. Amyot, Vancouver; President, British Columbia Public Health Association.

1. Professional Co-operation in Public Health.
 2. Public Health in Educational Institutions.
 3. Community Public Health Methods.
- Business.

WESTERN BRANCH, AMERICAN PUBLIC HEALTH ASSOCIATION**8.00 a.m.—Oak Room**

Breakfast, Regional Board.

9.00 a.m.—Oak Room

1. Training of Western Public Health Personnel—Dr. Fred T. Foard, Acting Assistant Surgeon, U.S. Public Health Service, U.S. Marine Hospital, San Francisco, Calif. Discussion opened by Dr. Karl F. Meyer, Professor of Bacteriology, University of California Medical School, and Director, Hooper Foundation for Medical Research, San Francisco, California.

2. Review of Plague in Seattle (1907) and Subsequent Rat and Flea Surveys—Dr. Lunsford D. Fricks, Medical Director, U.S. Public Health Service, Honolulu, T.H., and Dr. G. C. Lake, Surgeon, U.S. Public Health Service, Marine Hospital, Seattle, Washington.

Discussion opened by Dr. J. W. McIntosh, Medical Officer of Health, Vancouver, B.C.

3. Report of the Sylvatic Plague Committee—Dr. Karl F. Meyer.

Discussion opened by Dr. W. H. Kellogg, Director, Bureau of Laboratories, State Department of Public Health, University of California, Berkeley, California.

11.15 a.m.

Business session.

Chairman—Dr. W. F. Cogswell, Helena, Montana.

ALL ASSOCIATIONS

1.30 p.m.—Luncheon

Chairman—Dr. Guy S. Millberry, Dean, College of Dentistry, University of California, San Francisco, California.

1. Report of the Committee on Health Education Methods of the Western Branch, American Public Health Association—Louis Olsen, Esq., City Health Officer, Palo Alto, California.

Discussion opened by Dr. Ira V. Hiscock, Professor of Public Health, Yale University School of Medicine, New Haven, Connecticut.

2. Modern Concepts of Health Education—Dr. Ira V. Hiscock.

Friday Afternoon, June 26th

CANADIAN PUBLIC HEALTH ASSOCIATION
WESTERN BRANCH, AMERICAN PUBLIC HEALTH ASSOCIATION
CANADIAN TUBERCULOSIS ASSOCIATION

2.30 p.m.—Oak Room

Chairman—Dr. R. O. Davison, Deputy Minister of Public Health of Saskatchewan, Regina.

1. Values and Limitations of Some Fundamentals in Tuberculosis Prevention—Dr. R. G. Ferguson, Director of Medical Services and General Superintendent, Saskatchewan Anti-Tuberculosis League, Fort San, Sask.
2. Public Interest in Cancer and Diabetes—Dr. J. D. Dunshee, Public Health Adviser, Department of Public Welfare, State of Idaho, Boise.
3. Diabetes as a Public Health Problem—Dr. R. D. Defries, Associate Director, School of Hygiene and Connaught Laboratories, University of Toronto.
4. Films: Sylvatic Plague and Psittacosis—Dr. K. F. Meyer, The George Williams Hooper Foundation, University of California, San Francisco.

WESTERN BRANCH, AMERICAN PUBLIC HEALTH ASSOCIATION

5.30 p.m.—Business session

Friday Evening, June 26th

WESTERN BRANCH, AMERICAN PUBLIC HEALTH ASSOCIATION

7.30 p.m.—Wedgewood Room

Annual Dinner and Business Meeting.

Chairman—Dr. H. E. Young, Victoria, President.

CANADIAN PUBLIC HEALTH ASSOCIATION

7.30 p.m.—Oak Room

Papers, final reports, etc.

Chairman—Dr. J. W. McIntosh, Vancouver, President.

NOTE: Boat leaves for Victoria at midnight.

Saturday Morning, June 27th—Victoria

9.15 a.m.

Reception, Parliament Buildings.

Visit to points of interest.

SECTION OF SCIENTIFIC AND COMMERCIAL EXHIBITS

IN addition to commercial exhibits, arrangements have been made for the following scientific exhibits in Hotel Vancouver:

1. Vancouver School Medical Department: results of goitre prevention in the schools and health education.

2. The proposed plan of the Metropolitan Health Department for Greater Vancouver.

3. The system of field health records in use in the Health Unit in North Vancouver.

4. Metropolitan Life Insurance Company: an exhibit of posters and pamphlets, sponsored by the San Francisco office and the Canadian Head Office, Ottawa.

5. Laboratory exhibit.

6. Victorian Order of Nurses for Canada.

7. Provincial Public Health Nurses of British Columbia: the development of different phases of public health in the province.

8. Canadian Welfare Council: maternal mortality in Canada.

9. Canadian Tuberculosis Association: (a) provincial tuberculosis organization in British Columbia; (b) tuberculosis surveys in schools and nursing and industrial groups; (c) the problem of respiratory efficiency; (d) chest cases; and (e) educational material and methods of handling educational work.

10. Activities of the Greater Vancouver Health League.

11. The British Columbia Cancer Foundation: work and plans for the control of cancer in the province.

VANCOUVER BY RAIL, STEAMSHIP, MOTOR BUS OR AIR TRANSPORTATION

THE travel routes to Vancouver are many and varied, routes by rail through entrancing mountain scenery, by wonderful motor roads, and by palatial ocean steamers.

RAILROAD

There is a wide choice of routes. It is possible to travel west by one line either through Canada or the United States and return by another. The journey from eastern Canada may include travel by the Great Lakes. An attractive tour is provided by traveling westward to Prince Rupert and taking the steamship through the inland channel to Vancouver, occupying two days, and returning from Vancouver eastward by train. The only extra costs are meals and berth while on the steamer. One may also travel from the East by way of Chicago, enjoying air-conditioned cars, and return through the Canadian Rockies and Western Canada. It is important to remember that tickets should be

purchased from the starting point to Victoria as the cost is the same as to Vancouver and one session of the program will be held in Victoria. Announcements of the Canadian Pacific Railways and the Canadian National Railways will be found in the advertising section of this issue. Special low summer tourist railroad rates will be in effect, giving adequate stop-over privileges. In view of the preference of many members for the summer tourist rates, no certificate plan has been provided. The following round trip rail fares and Pullman rates to Vancouver and Victoria will be in effect:

From	Round Trip Rail Fare (45-day limit)	Pullman Rate (one way)
Washington	\$120.75	\$24.00
New York	126.90	24.75
Minneapolis	72.00	13.25
Chicago	86.00	15.75
Montreal	117.75	24.20
Toronto	103.35	22.55
Winnipeg	72.00	14.60

Regina	59.95	11.55
Edmonton	40.00	8.60
Calgary	40.00	8.60

STEAMSHIP

For those coming to Vancouver from the Pacific coast, the Pacific Steamship Company plans to resume passenger service on May 1st between Los Angeles, San Francisco, and Seattle. The Canadian Pacific Steamships provide regular service between Seattle, Victoria, and Vancouver. One of the most interesting trips for those living in eastern Canada and the United States is provided by the steamship lines from New York and San Francisco by way of the Panama Canal. The cost is low and the trip offers an excellent opportunity for an uninterrupted restful holiday.

MOTOR BUS TRAVEL

Crossing the continent by motor bus is becoming increasingly popular. Special provisions for comfort, meals, and night rests are made by the various bus companies. The traveller has the opportunity of following sections of the country which are not seen from the railway car. It is possible to travel only in the day and rest by night in comfortable, modern but modestly priced hotels, or one can travel night and day. The cost is very low and a variety of routes is offered.

PRIVATE MOTOR CAR

Details in regard to roads, the best routes, interesting stop-overs, hotels, auto camps, and other information can be procured from the hundreds of branches of the American Automobile Association and many of the oil companies. The motorist may get valuable maps from gas stations. Moderate prices and comfortable sleeping accommodation are provided through the many new and modern hotels on the highway. If well planned, the cost of modern motor travel is exceptionally low.

AIR TRANSPORTATION

There are three air lines with their Northern Pacific terminals at Vancouver. Air travel eliminates distances. Using the United Air Lines, for example, it is possible to travel from practically any point on the continent to Vancouver in less than a day. The short time en route makes it as reasonable as any first-class mode of travel. The flying time from New York to Vancouver is only 20 hours, from Buffalo 19 hours, Cleveland or Detroit, 17½ hours, Chicago 16 hours, Salt Lake City 7 hours, Los Angeles 9 hours, San Francisco 7 hours, and Portland 2 hours.

HOTELS

THE convention headquarters will be the Hotel Vancouver. Due to the Golden Jubilee celebrations in Vancouver this year, it will be advisable to make reservations at the earliest

possible time. The following hotels offer excellent accommodation and are within reasonable distance of the headquarters:

Hotel	Distance from Headquarters	Single Room		Double Room	
		Without Bath	With Bath	Without Bath	With Bath
Vancouver..	.....	\$2.50	\$4.00	\$4.00	\$6.00
Georgia....	Half a block	.....	\$3.00 up	.....	\$4.50
Devonshire.	One block	.....	\$3.00	.....	\$4.00*
Ritz.....	Two blocks	.....	\$3.00 up	.....	.....
Grosvenor..	One block	\$1.50	\$2.00—\$2.50	\$2.50	\$3.00—\$3.50
Elysium....	Five blocks	\$1.50 up	\$2.00 up	\$2.50 up	\$3.50 up
Alcazar....	Four blocks	\$1.00	\$2.00	\$1.50	\$2.50
York.....	One block	\$1.50	\$2.00	\$2.50	\$3.50

*Kitchenette suites, 1 person \$3.50, 2 persons \$4.50, 3 persons \$5.00.

NEWS FROM THE FIELD

DR. J. G. FITZGERALD TO MAKE INTERNATIONAL STUDY OF METHODS OF TEACHING PREVENTIVE MEDICINE

DR. J. G. FITZGERALD, Dean of the Faculty of Medicine, Director of the School of Hygiene and of the Connaught Laboratories, University of Toronto, has been invited by the Rockefeller Foundation to make a study of the methods at present employed in the teaching of Preventive Medicine to undergraduates in medical schools. It is anticipated that the study will occupy a period of one year commencing September 15, 1936. Dr. Charles Edward Smith of the Stanford University Medical School, San Francisco, will assist in the undertaking. University Medical Schools in the United States and Canada, the British Isles, and in European countries will be visited in the course of the survey.

Dr. FitzGerald is to resign as Dean of the Faculty of Medicine, University of Toronto, June 30th next. He will be given leave of absence by the Governors of the University for the necessary period and will, it is expected, return to the University of Toronto in September, 1937, as Director of the School of Hygiene and of Connaught Laboratories.

The Canadian Dietetic Association is planning a conference in the Royal York Hotel, Toronto, on May 22nd and 23rd. Among the subjects for discussion are nutrition in relation to chronic arthritis, general problems of dietitians in hospitals, and a symposium on commercial problems with reference to restaurants, hotels, etc. A dinner will be held on Saturday evening. An invitation to attend the sessions is extended to all who are interested.

Dr. J. S. Cull, D.P.H. (Tor.), is now director of the Peace River Health Unit with residence at Pouce Coupe, B.C., under the direction of the Provincial Board of Health.

Announcement has been made of the transfer of mental hospitals in Saskatchewan from the Department of Public Works to the Department of Health.

Dr. F. W. Jackson, D.P.H., Deputy Minister of Health and Public Welfare, Manitoba, was guest speaker at the third annual North Western Women's Conference in Minneapolis recently, his topic being "Medical Care and Social Security". He also addressed a seminar of the Medical School, speaking on "The Provision of Medical Care in Western Canada".

Miss E. Kathleen Russell, B.A., B.Paed., director of the School of Nursing, University of Toronto, will return to Canada late in May after completing the direction of a three-months' study of the facilities for nursing education now existing in London, England. Associated with Miss Russell in this study, which was initiated by the Florence Nightingale Memorial Foundation, were Professor Beatrice Wegell, Ph.D., until recently professor of psychology at the Bedford College for Women, University of London; Miss M. A. Gullan, Sister Tutor in St. Thomas's Hospital, London; and Miss Helen Dey, Matron and Superintendent of Nurses, St. Bartholomew's Hospital, London.

A most successful refresher course for public health nurses, sponsored by the School of Nursing in co-operation with the Department of University Extension, University of Toronto, was held in the Royal York Hotel, Toronto, on May 13th, 14th and 15th, with an enrolment of sixty nurses from all parts of Ontario and from Montreal. The general subject was "Changing Practices in the Field of Child Hygiene" and the speakers included Dr. F. F. Tisdall, Dr. W. E. Blatz, Miss M. Bell, Dr. C. C. Goldring, Miss F. Held, Miss E. Cryderman, Miss E. L. Moore, and Miss M. Millman.

BOOKS AND REPORTS

Sedgwick's Principles of Sanitary Science and Public Health.

Rewritten and enlarged by Samuel C. Prescott, Sc.D., Dean of Science and Head, Department of Biology and Public Health, and Murray P. Horwood, Ph.D., Associate Professor of Biology and Public Health, Massachusetts Institute of Technology. The Macmillans in Canada, St. Martin's House, 70 Bond Street, Toronto, 1935. 654 pages. Price, \$4.75.

To read this book is to understand why students of sanitary science and public health of 30-35 years ago found in Sedgwick's "The Principles of Sanitary Science and Public Health" not only authoritative information but also inspiration and pleasure. This revision by Professor Sedgwick's successors fully maintains the standard of the original both in material and lucidity and beauty of presentation. Many of the chapters have been entirely rewritten and new chapters have been added. In doing this the material has been brought thoroughly up to date, obsolete ideas have been discarded, and progress in sanitary science recorded.

The preface states: "While the preparation of this text has been designed primarily for students in science or engineering interested in sanitary science and public health, it is hoped that the subject matter included in the revision may have a more widespread appeal. It should also prove of interest and value to public health officials, public health engineers, public health nurses, social workers, and civic minded men and women who are interested in public health work." This is a conservative statement. The book should certainly prove of very definite interest and value to those indicated and most physicians would profit by reading it.

It covers the whole field of sanitary science succinctly but thoroughly and from a modern point of view, even including a chapter on "The Sanitation of Summer Camps". Other chapters, which indicate the main purport of the book are "Water as a Vehicle of Infectious Disease", "Ice as a Vehicle of Disease", "Milk Supplies and the Public Health", "Excreta and Sewage Disposal", "Dirt, Dust, Air and Disease", "Air in Relation to Health and Comfort", "Nutrition and Public Health", "The Relationship of Housing to Health", "Flies and the Public Health", etc. While the two subjects necessarily overlap, this book is more of sanitary science than of preventive medicine and as such it is to be highly commended.

N. E. McKinnon

The Sanitary Inspector's Handbook.

A manual for sanitary inspectors and other executive public health officers by Henry H. Clay, F.R.San.I., F.I.S.E. Second edition. Published by H. K. Lewis & Co. Ltd., 136 Gower Street, London, W.C. 1, England, 1936. 432 pages. Price, 15s. net.

It is indeed a tribute to the author that the first edition of this handbook was so quickly exhausted that a second edition has been called for within three years. In this volume of 432 pages Mr. Clay has presented all the essential information as relating to this field in a highly satisfactory manner. It has been prepared, of course, primarily for sanitary inspectors in Great Britain, presenting in detail legislation and practices as applying there. Apart from this limitation, it can be highly recommended to sanitary inspectors in other countries as a comprehensive and suitable handbook.

R. D. Defries

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